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# THE INDIAN REVIEW

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## The Indian Review.

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The sixteenth Indian National Congress held its sittings at Lahore in the last week of December in the

The Congress. Bradlaugh Hall, a magnificent building specially erected for the purpose by public donations. The Presidential speech of the Hon. Mr. N. G. Chandavarkar was, as expected of him, quite matter-of-fact and sober. Mr. Chandavarkar made an eloquent protest against the policy of "drift" which has been going on for the last so many years. The Congress, he said, has been from the beginning of its existence a standing protest against the policy of drift, and the time is now come—it is now most opportune—when standing out more emphatically than ever—it ought to redouble its efforts, and help the Government in the solution of the great Indian problem to which all eyes are now turned. We belong to a movement which is the product of the genius of the British administration. It is a movement which is the natural outcome of the spirit of the age, and all that is best, noble and enduring in the *Pax Britannica*, and the one duty that devolved on it is to stand forth and preach: "Not drift, but wise and sustained direction will save India. We consider it a happy augury that the proceedings of the Congress should have on the whole been referred to this year in sympathetic terms even by several Anglo-Indian organs which were hitherto not very friendly to the movement. As the late Sir William Hunter observed, "the Congress movement is the legitimate and inevitable result of Western education in India and it represents the laudable aspiration of the educated classes to do their part in promoting the welfare of India, and especially in improving the economic condition of the masses. Now, more than ever, there is urgent need for the Government and the people to work in co-operation, and we sincerely trust that the new century has inaugurated a bright future for the cordiality between the rulers and the

Truly our Kohinor is lost. The gem of the Indian community is gone. The brightest specimen of the Indian intellect has been snatched away by the cruel hand of death. On Wednesday the 17th January, in the stillness of the midnight, the Honorable Mr. Justice Mahadev Govind Ranade, C. I. E., M. A. L., L. B., passed away in peace. When it was announced that he was to take leave for six months, it was everywhere eagerly hoped that the leave was preparatory to his final retirement from government service to carry out his cherished desire of actively participating in the public movements of the day and thus placing his time and talents at the disposal of his countrymen. However, within a few days the news spread that his health was declining and it caused the most serious anxiety in all quarters and public feeling was soon relieved by the announcement that he had recovered and that he was out of danger. But death which comes to all has come and has laid its icy hands on the great Brahman jurist.

The late Mr. Ranade was a typical example of a self-made man. Born 59 years ago, the son of a Mahratta Brahmin official in the Kolhapore State, Mr. Ranade had his education at the Elphinstone College, Bombay, and took the highest honours in Arts in 1864, and in Law in 1866. His distinguished academical career gained for him the Senior Fellowship of his College. In 1866 he entered the Bombay Educational Department as Mahrathi Translator, and very soon after was made a judge of the Kolhapore State. He remained a short time there however, for in 1867 he was appointed to a Professorship in English Literature at his old College, a rare compliment to an Indian graduate. He continued in this appointment until 1871, with brief intervals in acting appointments as Law Reporter, Police Magistrate and Small Cause Court Judge. We are told by a contemporary

that as a Professor he proved himself to be possessed of such a wonderful talent for teaching and exegesis that it was no uncommon thing for his fellow European Professors to attend his lectures. The then Director of Public Instruction referred on one occasion to his "wonderful intellect" and "comprehensive mind," while his memory was such that it is said he could after reading a book write out the best part of its contents with the greatest facility. Meanwhile, he did not lose sight of Law, and he successfully passed the examinations for Advocates, which conferred upon him the status of a Barrister. In 1871 he left the Educational Department on being appointed Subordinate Judge at Poona, and he afterwards served in the same capacity at other places. In 1881, he was specially selected as Subordinate Judge under the Deccan Agriculturists' Relief Act, and in 1884 he was appointed Small Cause Court Judge at Poona. In 1886 he was specially selected as a member of the Indian Finance Committee by reason of the talent for figures that he had displayed, and in 1887 he was created a C. I. E. for his good services on the Committee. He had the unique honor of being appointed on several successive occasions to be a member of the Bombay Legislative council until the end of 1893, when he succeeded Mr. Justice Telang as a Judge of the Bombay High Court, in which capacity he served until his death.

But though he spent his life throughout in the service of the State, still his career was not wasted in the performance of the dry routine duties of the public servant. Mr. Ranade from youth upwards took a deep interest in public movements. He devoted himself carefully to the study of all Indian questions educational, religious, social, industrial, and political. On everything he touched he brought to bear his deep scholarship and learning, his keen insight into human nature and his eminently practical view of things. Indeed, it is his scrupulous and thorough study of facts and figures and the utter absence of all that

is sentimental and impracticable that commanded for his opinions the respectful attention of both natives and Europeans alike. The two great questions in which he interested himself deeply were the social and economic condition of the people. He may be styled the father of the National Social Conference. Year after year Mr. Ranade used to commence the proceedings of this conference with an inaugural address in which he used to take a general survey of the events of the year. But though it was Mr. Ranade that discoursed every time, yet it was not the old story that he repeated. Indeed, he gave a freshness to everything he touched and in the charitable spirit of the true reformer, he exposed the faults of the Hindu community in language which was at once inoffensive and graceful. It is a remarkable fact that whenever he spoke on the delicate subject of social reform he never indulged in platitudes or sentimental appeals to human feeling and passion. Here, as in other topics he dealt with, he went to the root of the question, examined it critically and then stated his view in a fair and impartial spirit. His attitude towards social questions brought on him some unpopularity, but actuated by the true spirit of the reformer, Mr. Ranade persisted and persevered in bringing home to the minds of his countrymen what he considered to be right views on social reform. In his death the reform movement has lost its honoured and veteran leader for whom it will be difficult to find a fitting substitute.

Though Mr. Ranade was a Government servant, yet he did not conceal his love for the Indian National Congress. He used to be present on the opening day of almost every Congress meeting. A patriot of high order he could not but encourage whatever made for the progress of his country. A clever and intelligent student of Indian Economics, Mr. Ranade, while approving in the main of the general aims and aspirations of the Congress movement, believed, however, more in

self-help for accomplishing the difficult task of building up the political future of the country. He relied greatly on the industrial regeneration of India for the removal of much of her present agrarian and economic distress. In an address delivered to the Industrial Conference held at Poona many years ago, he laid stress on this point. He counselled the abandonment of all impracticable objects and urged on his countrymen to develop the industrial resources of the country. In the address referred to, he observed, "We must realise clearly our exact situation, *i.e.*, first, our phenomenal poverty, and secondly, our growing dependence on the single and precarious resources of agriculture. The proper scope of the work to be done is to correct the disproportion between our engrossing production of raw agricultural produce and our backwardness in the production and distribution of manufactured produce. For the achievement of these ends the Indian people must look to themselves first and then to Government for aid. State help is, after all, a subordinate factor in the problem. Our own exertions and our own resolutions must conquer the difficulties which are chiefly our own creation." This was, in short, the late Mr. Justice Ranade's "economic message" to his countrymen and for his better views on industrial and political topics we must refer the reader to his most thoughtful and suggestive book—"Essays on Indian Economics."

At this moment when the country is passing through a critical period of distress, when the Government and the thoughtful Indian public are applying their minds to seek remedies for alleviating the miserable material condition of the people, the death of a deep thinker and economist like Mr. Ranade who had a clear grasp of the situation is nothing short of a calamity. At this moment when many of the master-minds of the older generation have passed away, when the nation is sadly in need of leaders, worthy of their name and fame, many had fondly hoped that the distinguished Brahmin judge would, upon

after his retirement take the place of the guide philosopher, and friend of the Indian people in rearing up their political development. But man proposes and God disposes, and once again the nation has suffered grievous disappointment and our only hope lies in the self-same cheery optimism which was a marked characteristic of all Mr. Justice Ranade's speeches and writings.

We have not referred to the great service rendered by the late Mr. Ranade to the cause of Indian history. His late lamented friend Mr. Justice Telang did not live to achieve his ardent desire of writing the history of his race, and had requested on his death-bed his honoured friend, Mr. Ranade, to carry out his wish. The pious and sacred promise he had made to his dying friend, Mr. Ranade fulfilled by the publication, a few months ago, of the first volume of "The Rise of the Mahrattas." The second volume of this important work was stated to be ready, and we sincerely trust it is so. Mr. Ranade had hoped to bring out two important political books namely "Notes on Decentralisation" and "A Revenue Manual."

To turn now to Mr. Ranade, the man in private life. He was the embodiment of simplicity itself. Plain, unassuming, with a genial look peculiar to himself, he made himself dearly loved by all. The merchant and the lawyer, the schoolmaster and the politician, the social and industrial worker—all alike looked up to him for "light" which was freely given. His sympathies were broad-based and his catholic and generous heart made him mix freely with all classes of people and enter into their wants and aspirations.

And here we must bring our brief and hurried remarks to a close. Within the short space of an editorial note it is not possible to do justice to the genius and talents and the many-sided virtues and activities of the great soul that has passed away from our midst. That, we reserve for a future occasion. For the present we join in the universal mourning.

We are glad to note that His Excellency Sir Arthur Havelock has withheld his assent to the **The Hindu Gains of Learning Bill.** Hindu Gains of Learning Bill. His doing so, we

understand, was the result of the opinion formed by him, after much personal discussion of the matter with Hindu gentlemen of various classes and after careful perusal of the voluminous correspondence connected with the Bill. The measure which would deeply and widely affect the Hindu social system, and which was so much in advance of existing law and sentiment on the subject, should not be passed into law without the most careful consideration, or without the admitted support and approval of the general Hindu public. To ensure such consideration and to provide further opportunity to make certain that there is such support and approval, His Excellency decided to withhold his assent and to leave it to the supporters of the Bill to bring it forward again in a future session, if necessary,

When the announcement was made that H. E. Lord Curzon had decided to appoint a Famine Commission, it was believed that it was the outcome of the open letters addressed by Mr. Romesh Chunder Dutt to His Excellency on the subject of Famine and Land assessments. The resolution of the Government of India defining the scope of the Commission's enquiry has therefore come as a disappointment to many. The object of the Famine Commission now appointed is stated to be "to collate and consider the experiences of the late famine while they are still fresh in the memory of the Government and the people and to investigate the differences in the methods of relief which have been adopted in the different provinces of British India both as regards their success in saving life or in mitigating distress and also as regards efficiency and economy." It is true, the Commission is not precluded from recording any recommendations or opinions which may be of use "either in anticipation or in the treatment of future famines." But its investigations are apparently to be confined to the methods of administration of Famine Relief. It would appear that on the question of the incidence and

pressure of the land assessment in the different provinces, the Government of India has addressed the various local Governments and that the necessity for further investigation of the subject would be decided on only after a study of their replies. The Famine Commission is however permitted to ask in the course of its enquiries any question on this subject "solely with a view to obtaining information likely to be of use in connection with the matters specially referred to it for examination and report. The Commission has drawn up 112 questions which define the points for enquiry and these seem to shew that the scope of its investigations will be very limited. The questions are of such a nature that any person outside the select circle of officers connected with the administration of the last famine cannot be expected to be able to answer them, and they cover almost the same ground, but on a very limited scale, as the enquiries of the Famine Commission of 1898 did. The general principles to be followed in the administration of Famine Relief were for the first time propounded by the Famine Commission of 1876. These were almost wholly accepted by the Government of India and the Secretary of State. The rules for the regulation of famine administration were then codified by the Government of India and a *provisional* Famine Code was circulated to the local Governments for adoption with such modifications as were necessary to suit local conditions. Madras was first in the field with its Provincial Code in 1882. This Code was revised in the light of the experience gained in the Ganjam famine of 1889 and the general famine of 1891-92 and is now undergoing a further revision with reference to the recommendations of the Famine Commission of 1898. The several Provincial Famine Codes deal solely with the modes of testing the existence of famine and the methods of administering Famine Relief and the present Famine Commission is obviously meant only for considering the ways of perfecting these Codes. None of the main recommendations of the Famine Commission of 1898 found favor with Local Governments—and they seem to have been practically ignored by the Governments of the North-West Provinces, the Central Provinces and Bombay in the administration of the famine of 1899. The question of wages and rations is the most important in famine administration and on this point the recommendations of the last Commission were considered too liberal. We await with interest what the present Commission will say on the subject.

## MR. MORLEY'S OLIVER CROMWELL.\*

THE Editor has asked me to contribute a notice of Mr. Morley's new book on Cromwell and I have consented to do so, because I am glad to introduce so good a book to the readers of the *Review* and also because, in so doing, I shall find an opportunity, which I might not have sought elsewhere, of meeting certain exceptions taken by Mr. Morley to the view for which I have ventured to contend, of one of the most famous incidents in Cromwell's career. Mr. Morley's book is not only admirably written, as was indeed to be expected, but also singularly well-informed. He has clearly read everything of any importance that has been printed about Cromwell, leaving manuscript sources, as yet unexplored, to be examined by professed historians like Dr. Gardiner and Mr. Firth. In judging the politics of Cromwell's times, he has been, in general, greatly aided, if at times, perhaps, a little warped, by his own experience of great affairs. Some of his judgments suggest personal experience quite as much as theoretical observation, as when, for instance, some may think he tells us that "no inconsiderable part of history is a record of the illusions of statesmen."

The opening chapters on the causes of the great struggle which brought Cromwell to the front are among the best in the book, and may especially be commended to Indian students as a corrective of the stale misjudgments which are apt to be repeated as safe and orthodox in school text-books, long after they have been discarded by competent inquirers. No greater contrast can be imagined than Mr. Morley's account of the events which led up to the Civil War and the account to be found in Macaulay's well-known review of Hallam's History. "Just as the historic school," Mr. Morley writes, "has come to an end, that despatched Cromwell as a hypocrite, so we are escaping from that other school that dismissed Charles as a tyrant, Laud as

\* Oliver Cromwell by John Morley, MacMillan & Co.



"a driveller and a bigot and Wentworth as an apostate." In many of the disputes between Charles and the popular party, the king, as Mr. Morley sees, had the letter of the law on his side. Indeed, he even hints a doubt which few who have endeavoured to follow these discussions for themselves can fail to share, whether the popular champions themselves believed in the precedents drawn from our history to which they thought it expedient to appeal. With regard too to Charles' execution, Mr. Morley writes very sensibly :—

Extravagant things have been said about the execution of the King by illustrious men from Charles Fox to Carlyle. 'We may doubt,' said Fox, 'whether any other circumstance has served so much to raise the character of the English nation in the opinion of Europe.' 'This action of the English regicides,' says Carlyle, 'did in effect strike a damp like death through the heart of Flunkysm, universally in this world. Whereof Flunkysm, Cant, Cloth-worship, or whatever ugly name it have, has gone about miserably sick ever since, and is now in these generations very rapidly dying.' Cant, alas, is not slain on any such easy terms by a single stroke of the republican headsmen's axe. As if for that matter force, violence, sword, and axe, never conceal a cant and an universality of their own, viler and crueler than any other. In fact, the very contrary of Carlyle's proposition as to death and damp might more fairly be upheld. For this at least is certain, that the execution of Charles I. kindled and nursed for many generations a lasting flame of cant, flunkysm, or whatever else be the right name of spurious and unmanly sentimentalism, more lively than is associated with any other business in our whole national history.

As regards Cromwell himself, Mr. Morley is no inappreciative biographer, but his appreciation is more tempered by criticism than has been usual since Carlyle introduced the fashion of writing about Cromwell in the dithyrambic fashion. 'History after all,' Mr. Morley observes, "is something besides praise and blame. To seek measure, equity, balance is not necessarily the sign of a callous heart and a mean understanding. For the thirst after broad classification works havoc with truth; and to insist on a long series of unqualified clenchers in history and biography only ends in confusing questions that are separate, in distorting perspective, in exaggerating proportions and in falsifying the past for the spurious education of the present."

My object in writing this notice is rather to send readers to the book itself than to

describe its contents, but there is one point in Cromwell's action in dispersing the remnant of the Long Parliament with which I should like to deal briefly. Attempting to trace the constitutional history of the *Interregnum* in an article published in the *Nineteenth Century*, last February, and entitled "Cromwell's Constitutional Experiments" I ventured to write (p. 443).—"It seems to me that Cromwell's own defence of his action in expelling the remnant of the Long Parliament has been almost entirely ignored, though plainly expressed in his speeches. Put into modern language, it comes to this: that he was forced to act, because the members of the House were on the point of perpetuating a system of Government by a single Chamber engrossing all the powers, legislative, executive and judicial in the State and likely to lead, as he said in language borne out by the subsequent examples of the French Convention, to the horriddest arbitrariness that ever was exercised in the world." Mr. Morley's hatred of force, under all circumstances, and his reverence for parliamentary government prevent him, I cannot help thinking from allowing the full force of this contention in Cromwell's favour; but it has, I am glad to say, been fully recognised by the great authority of Dr. Gardiner, in a review of Mr. Morley's book. "Undoubtedly" Mr. Morley writes, "a horrid degree of arbitrariness was practised by the Rump, but some allowance was to be made for a Government in a revolution; and if that plea be not good for the parliament, one knows not why it should be good for the no less horrid arbitrariness of the Protector. As for the general character of the constitution said to be contemplated by the remnant it has been compared to the French Convention of 1793, but a less invidious and a truer parallel would be with the Swiss Confederacy of to-day. However this may be, if dictatorship was indispensable, the dictatorship of an energetic parliamentary oligarchy was at least as hopeful as that of an oligarchy of soldiers." This is hardly fair to Cromwell whose aim throughout, was

not to establish an oligarchy of soldiers, but to provide a working constitution on parliamentary lines. His efforts were unsuccessful but he has at least the merit, which must be denied to Vane and his apologists, of seeing that some constitution was necessary to take the place of that which had been swept away, and that such a constitution was not to be found in leaving all the authority of the State in the hands of a single chamber wholly uncontrolled. This uncontrolled authority had devolved on the remnant of the Long Parliament, on the abolition of the Monarchy and the House of Lords; but in handing it on, as was proposed, without any constitutional safeguards to a newly-elected chamber, the remnant was in fact establishing a permanent constitution for the nation—not to be overturned except by revolution, for popular chambers are about the last bodies in the world to consent to a curtailment of their powers. It was only when the Bill for effecting this was being hurried through, contrary to the assurances given him, that Cromwell went down and dispersed the remnant.

With regard to the comparison of the constitution which Cromwell's action averted to the French convention, such a vesting of uncontrolled authority legislative, executive and judicial in the hands of an elected chamber was precisely the constitution of the French Convention of 1793. Constitutionally, therefore, this parallel is exact and neither invidious nor untrue. It was not of course intended to suggest that an assembly of the English Puritans of the seventeenth century would have been guilty of the excesses committed by the French Jacobites of the eighteenth. But that they would have been likely to abuse the despotic authority possessed by them appears abundantly from the action of the remnant itself, before its forcible dissolution and from the conduct of the second Protectorate Parliament where the Protectorate constitution left it a loophole for arbitrary action as in the case of Naylor. Further it would be interesting to hear Mr. Morley's reasons

for thinking that the Commonwealth constitution of a single chamber possessing uncontrolled power finds a parallel in the Swiss Confederacy of to day. As Mr. Dicey has pointed out in his *Law of the Constitution*, the chief characteristic of the Swiss Federal assembly is its weakness. It does, indeed, elect the Executive, but cannot dismiss them; and its powers of legislation are circumscribed by the Federal constitution and especially by the provision that its enactments on most important subjects shall not take effect until ratified by the popular vote under the Referendum. The rest of Cromwell's political life was taken up by unsuccessful efforts to find a workable scheme of Government where success was perhaps impossible.

In conclusion, I may quote Mr. Morley's reasonable and well-informed estimate of Cromwell's career as a whole which is in striking contrast to much that we heard at the Cromwell centenary:—"To imply that Cromwell stands in the line of European dictators with Charles V or Louis XIV or Napoleon is a hyperbole that does him both less than justice and more. Guizot brings us nearer to the truth when he counts Cromwell, William III, and Washington as chiefs and representatives of sovereign crises that have settled the destinies of nations. When we go on to ask what precisely was Cromwell's share in a mission so supreme, the answer, if we seek it away from the prepossessions of modern controversy, is not hard to discern. It was by his military genius, by the might of the legions that he created and controlled and led to victory upon victory; it was at Marston and Naseby, at Preston and Worcester, in Ireland and at Dunbar, that Cromwell set his deep mark on the destinies of England as she was, and of that vaster dominion into which the English realm was in the course of ages to be transformed. He was chief of a party who shared his own strong perception that neither civil freedom, nor political, could be made secure without the sword, and happily the swordsman showed himself consummate. In speed and vigour, in dash and in prudence, in

force of shock and quick steadiness of recovery ; in sieges, marches, long wasting campaigns, pitched engagements ; as commander of horse, as tactician, and as strategist, the modern expert ranks Cromwell among the foremost masters of the rough art of war in every branch. Above all, he created the instrument which in discipline, skill, and those highest virtues that come of moral virtues, has never been, surpassed. In our own half century now closing, alike in Western Europe and across the Atlantic, the torch of war has been lighted rather for unity of race or State, than for Liberty. Cromwell struck for both. It was his armed right hand that crushed the absolutest pretensions alike of crown and mitre, and then forced the three kingdoms into mould of a single State. It was at those decisive moments when the trembling balance hung on fortune in the battle-field, that the unconquerable captain turned the scale. After we have discussed all the minor aspects of his special policies on this occasion or the other, after we have scanned all the secondary features of his rule, this is still what in a single sentence defines the true place of Cromwell in our history."

"Along with that paramount claim he performed the service of keeping a provisional form of peace, and delivering the nation from the anarchy in which both order and freedom would have been submerged.

"He made what some of the best of his contemporaries thought dire mistakes ; he forsook many principles in his choice of means, which he intended to preserve in working out the end ; and many of his difficulties were of his own creation. Yet watchfulness, self-effacement, versatility, and resource for the time and on the surface repaired all, and as 'constable of the parish' his persistency was unfaltering and unmatched. In the harder task of laying the foundations of a deeper order that might be expected to stand after his own imperious control should be withdrawn, he was beaten. He hardly counted on more. In words already quoted, 'I did not of necessity,' he said, 'undertake that business, not so much out of

a hope of doing any good, as out of a desire to prevent mischief and evil.' He reared no dam nor bulwark strong enough to coerce either the floods of revolutionary faction, or the reactionary tides that came after. 'Does not your peace,' as Henry Cromwell asked, 'depend upon His Highness's life and upon his peculiar skill and faculty and personal interest in the army?' That is to say, the protectorate was no system, but only the transitory expedient of individual supremacy."

"The instinct of order has been as often the gift of a tyrant as of a hero, as common to some of the worst hearts in human history as to some of the best. Cromwell was no Frederick the Great, who spoke of mankind as diese *Verdammte Race*, that accursed tribe. He belonged to the rarer and nobler type of governing men, who see the golden side, who count faith, pity, hope, among the counsels of practical wisdom, and who for political power must ever seek a moral base. This is a key to men's admiration for him. His ideals were high, his fidelity to them, though sometimes clouded, was still abiding, his ambition was pure. Yet it can hardly be accident that has turned him into one of the idols of the school who hold, shyly as yet in England but nakedly in Germany, that might is a token of right, and that the strength and power of the State is an end that tests and justifies all means."

All this is finely written. The subsequent remark that the English constitution has proceeded on lines that Cromwell profoundly disliked appears, however, to do him less than justice. If Cromwell had had anything like our present constitution to work with, there is no reason to think he would not have been well-content. That constitution took at least a hundred years more to come to maturity and then it was a development, not of the single-chamber omnipotence which Cromwell opposed, but of the old monarchical constitution to which he had so nearly reverted at the time of his death.

J. P. WALLIS.

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## THE EMPIRE OF VIJAYANAGAR.

## FIRST DYNASTY.

(A. D. 1336 to 1485).

THE closing years of the 13th century were momentous in the history of India. The old Hindu kingdoms were fast disappearing before the conquering Mussalmans. Hitherto the foreign conquerors had confined their attention to the subjugation of Northern India, but now the accumulated wealth of centuries in Southern India tempted the kings of Delhi to cross the Nerbada. The ever active, ambitious and successful Alauddin Khilaji not only conquered the kingdoms of the North but sent armies after armies to overthrow the prosperous kingdoms of Gujrath, the Deccan and Karnatic. The Gujrath and Maharastra kingdoms were easily destroyed and the Muhammadan power established itself there firmly, till four hundred years after it was reduced by the Marhattas. Allauddin's great General, Mallik Kafur, overran the peninsula as far as Rameshvar and vanquished the kings of the Ballal and Kakatiya dynasties in Mysore and Telangana. The Hoyasal Ballala of Mysore never recovered from the blow, but the Kakatiyas of Warangal resisted the Muhammadans for a century more. Thus, in the early quarter of the 14th century, the Deccan kingdom of the Yadavas of Deogiri, which extended to the south as far as the rivers Krishna and Malprabha, became a Muhammadan province.

Political intrigues at the Court of Delhi, jealousy amongst the generals and the rebellions of the Viceroys of Gujrath and the Deccan were sufficient to engage the attention of the Tughluk monarchs of Delhi, and no advantage was taken of the conquest of Karnatic by Mallik Kafur. The last king of the Ballals retired to Tonnur and his own vassals became independent. However, a new

and powerful Hindu dynasty was coming into existence which not only absorbed the kingdom of the Ballals but portions of the kingdom of Telangana also. While Jaffer Khan, the Viceroy of the Deccan, was scheming to establish an independent Mahomedan Sovereignty, known in history as the Bahmani kingdom of the Deccan, Raja Sangam, apparently a powerful vassal of the Ballals, and his five sons succeeded in establishing a Hindu Empire, the most powerful and prosperous in modern times, in Southern India.

Very little is known about this Sangam except what we find in the inscriptions, which say that he conquered Mysore and crossed the Kauvery with his victorious armies. This dynasty trace its origin from the Yadavas, but whether they were the vassals of the Ballals or of the Kakatiyas is still doubtful. Sangam's sons Harihar (Hukk) and Bukk are considered to be the founders of this new kingdom. Soon after the return of Mallik Kafur to Delhi, we find these brothers occupying the provinces of Goa, Talav (Kanara), Hoysal (Mysore), Banvasi and Kuntal (South Deccan). Tradition ascribes the foundation of this kingdom to the moral and material support of the great scholar, student and saint Madhav, otherwise known as Vidyananya, who after observing great austerity in the lonely and charming woods of Hampi, obtained a boon from the Goddess Bhuvaneshvari, who is said to have caused a shower of lions to fall on the new city of Vidyanagar, which was named after him. The city of Vidyanagar or Vijayanagar was founded in A. D. 1336 and its first monarch was Harihar, the eldest of the five sons of Sangam.

HARIHAR I.—(1336-1350 A. D.)

The first king extended his dominion, as is already shown, over the provinces of Mysore, Kanara and Banvasi. The northern limit was the rivers Malprabha and Krishna. It appears that the fort of Badami was strengthened by him. While he was at Vijayanagar his brother Bukk ruled the province of Mysore. His other brother Kamp administered the eastern districts and Mara ruled Banvasi.

King Harihar subjugated the old Jain Chieftains of Kanara and introduced a revenue system which was in force there till lately. He also subjugated the Arab chiefs who had occupied the western coast of Goa and Kanara. In A. D. 1343 he assisted the king of Warangal against the Musalmans. Ibu Batuta, who visited the western coast just at this period, records the war of Harihar against the Arab chiefs. The coast from Goa to Manglore and the inland country which were now in the possession of Hariappa were found by Ibu Batuta in a prosperous condition, lands fully cultivated, trade flourishing, and where thieves were unknown. Madhav Vidyaranya was the chief minister of the king and is mentioned as the ruler of Banvasi and conqueror of Goa from the Arabs.

BUKKA (1350-1379, A. D.)

While Harihar continued to call himself as only a great chief, his brother Bukka assumed all the titles of an Emperor and made Vijayanagar, the capital of the Empire. Bukka is considered to be the most powerful of the Vijayanagar kings and was the first monarch who had to defend his dominions against the attacks of the Bahmani kings of Kulburga. He and his successors called themselves the *Sultans of the Hindus*, being their protectors against the Musalmans for nearly 250 years. Bukka is also renowned as a patron of learning. The great and everlasting encyclopedic works of the brothers Madhav and Sayan were due to his patronage. The great commentary of the Vedas by Sayanacharya was begun in this reign and finished in the next reign of Harihar II.

The works of these two great scholars extend almost over the whole field of Sanskrit learning. This was the last attempt to revive the Vedic literature and ritual. Madhav was a Smartha Brahmin and a great advocate of the Vedant Philosophy of the Upanishads. He is styled as the chief minister of this and the next king, but really during this period he occupied the Chief Pontifical seat of Smart Brahmins at Shringeri in Mysore which was founded by the great Shankaracharya

in the 7th century. In all probability Madhav being Preceptor of these kings is described as Chief Minister out of veneration. Even now some ruined shrines and halls are found at Humpi which are ascribed to Madhav.

Emperor Bukka assisted king Rudradev of Warangal and therefore brought upon himself the wrath of Sultan Mahamad Shah, who invaded his territory in 1365 A. D. The seat of war was the Raichore Doab. Ferishta says that the Sultan defeated the king of Vijayanagar in several battles and massacred lacs of Hindus. Bukka made a treaty with the Sultan and an agreement was made that, in future wars, non-combatants should not be killed.

Mujahid Shah, the successor of Mahamad Shah, again made a war against Bukka in 1376 and laid siege to the capital. But in this war the Sultan had to yield before the superior numbers of the Hindus and retired to Adony where a treaty was soon effected.

Ferishta writes that the kingdom of Vijayanagar extended as far as Rameshwar. The army of the king was large and people brave; but their ardour did not last long. They advanced to meet an enemy with dances and songs. The Bahmani Sultans maintained their authority by their valour only. Goa, Belgaum and Tul Konkan also belonged to the king, whose country was populous, subjects contented and submissive. The kings of Malbar and Ceylon and other parts of India sent their ambassadors to his court with rich presents. The accumulated treasures of the king were equal to those of all the kings of the earth.

Bukka, though a Shiva worshipper, also respected the other sects of the Hindus and even the Jains received support from him. He amicably settled a dispute between the Jains and Ramanujas at Shravan Belgola in Mysore about their respective rights in religious processions through streets. Bukka is said to be a scholar, and many works of public utility such as tanks, canals and rest-houses were constructed by him. The great tank Bukkasagar in the Anantpur District is named after him.

## HARIHAR II.—(1379-1404 A. D.)

Bukka was succeeded by his son Harihar II. Having enjoyed peace for several years, he extended his empire in the Tamil country. About A. D. 1393 he established his supremacy over the last survivors of the most ancient royal houses of the Cholas and Pandyas. Inscriptions of Harihar II are found in Kanchi and Trichinopoly. He assumed the title of "Shardulmad-blhanjan" to commemorate his victory over the Cholas.

Harihar II is specially praised for his princely gifts to Brahmins, temples and colleges. He extended his patronage towards Jains also and followers of that sect were raised to high posts in the administration. Irug Dandadhip, a Jain scholar of some repute, built a Jinalaya in the city of Vijayanagar, still to be seen amongst the ruins. Harihar II continued his support to Sanskrit learning and the work of brothers Sayan-Madhav was completed in his time. While his contemporary Firuz Shah Taghluk was burning Brahmins and their books at Delhi, Harihar II became champion of Hindu religion in Southern India.

Inscriptions and grants of Harihar II are found in Dharwar, Kanara, Goa, Mysore, Bellary, Kadapa, Kanchi and Trichinopoly, which show the extent of his wide dominions. Ferishta mentions that a great famine lasting for 12 years devastated the Deccan and Karnatak. In this famine the distress of the people must have been aggravated by a war which broke out in 1398. The army of Vijayanagar crossed the river Tungabhadra and occupied the Raichore Doab. Sultan Ferozshah of Kulburga, however, surprised the Hindu Commander in his tent and killed him. The Hindu army retired in confusion and was pursued by the Mussalmans to the walls of Vijayanagar. A peace was as usual made on payment of indemnity. Just at this period Timor was carrying sword and fire in Northern India. Ferozshah of Kulburga is said to have sought his aid against the Mussalman kings of Gujraath and Khandesh, when the latter entered into an offensive and defensive alliance

with Harihar II. A second war was almost imminent but was only averted by the death of Harihar II in A. D. 1403. This king also undertook many public works and built several forts. A gold currency was in use and his gold and copper coins are found.

## DEVARAYA I.—(1405-1416 A. D.)

Devaraya was the son of the last monarch. During this reign the Hindus suffered reverses in their war with Ferozshah of Kulburga. This war was brought upon by the lust of the king for a beautiful girl, the daughter of a goldsmith of Mudgal. The king sought her hand but being refused he sent an army to Mudgal, which belonged to Ferozsha. The girl escaped, but a bloody war ensued which was humiliating to Vijayanagar. The king of Vijayanagar was forced to give up the forts of Navalgund and Bankapur and to give his daughter in marriage to the Sultan, whose zenana was famous for possessing beauties of many lands. This was the first alliance of its kind ever mentioned in the history of Southern India and its reliability entirely rests upon Ferishta. Ferishta gives a grandiloquent description of the royal nuptials, which were celebrated with great pomp. When Ferozshah visited his father-in-law, Devaraya, in Vijayanagar, "the road for some miles outside the city gate was spread with cloth of gold, velvet, satin and other rich stuffs. The two princes rode between the ranks of beautiful boys and girls who waved plates of gold and silver-flowers over their heads and threw them to be gathered by the people." This alliance of the two kingdoms did not last long as the sequel will show. Devaraya died about 1416 A. D.

## VIJAYARAYA (1416-1418 A. D.)

He was the son of the last king by his wife Demambika. This was a short reign. He is specially mentioned to be a great scholar and fond of women.

## PROUDHA DEVARAYA II.—(1418-1446 A. D.)

Son of Vijaya Bhupathi by his wife Narayanambika, Next to Bukka, he is the greatest king of the

• first dynasty. He recovered the lost provinces of Vijayanagar from the Mussalmans whom he defeated in wars. No sooner he ascended the throne than Ferozshah laid siege to the forts of Pangal and Ballamkonda. The war that ensued lasted for about two years and resulted in the complete defeat of the Muhamadans whose commander Meer Faizulla was killed and the Sultan had to run away for his life. Sultan Ferozshah died of broken heart and was succeeded by Ahmad Shah who removed his capital to Bedar. This Sultan declared a war against Devaraya in 1422 A. D. He crossed the Tungabhadra and surprised the Hindu camp on the other side. Devaraya was almost made a prisoner. This was a cruel war in which no mercy was shown to any Hindu. The Sultan took pride in killing the largest possible number of Hindus and like the other Mussalman fanatics, destroyed temples, burnt monasteries and colleges and broke idols. After a prolonged siege of Vijayanagar, which the Sultan could not reduce, a treaty was effected on payment of heavy indemnity by Devaraya. No territorial advantage was secured by the Mussalmans. A famine occurred in 1424-25, in this part of the country, possibly the result of this war. As Devaraya could not render any assistance to the Raja of Warangal, that ancient kingdom, which had resisted the Mussalmans for a century, was finally subdued by the Bahmani Sultan in A. D. 1425.

During the last-mentioned war, Devaraya found the weakness of his army in archery and therefore took 2,000 Mussalman arches into his service and raised an army of 80,000 Hindu arches. He induced the Mussalmans to settle in Vijayanagar and even allowed them to build a mosque in the city. The Muhamadans had sufficiently lost their bigotry to take service under an infidel king, but their scruples were respected by Devaraya by permitting them to render obeisance to a copy of the Koran placed on a pedestal in his court. Sultan Ahmad Shah died in 1435 and was succeeded by Allauddin. His brother Mahamad rebelled against him and with the assistance of Devaraya took Raichore, Bijapur

and Shoranur. This confusion in the Bahmani kingdom made Devaraya the greatest monarch of South India.

Besides the Muhamadan historians and inscriptions, much information about the kingdom of Vijayanagar during this reign is obtained from the writings of two foreign travellers, one of whom Nicola Conti, was a Venetian trader who visited the cities of Bedar and Vijayanagar about this time. He found the latter city rich and populous. It had a circumference of 60 miles and was protected by walls. It contained an army of 90,000 soldiers. He found the practices of Sati and swinging by hooks in use and at the car-festivals men threw themselves under the wheels to be run over. As a Christian, he was shocked to learn that the king had a large number of wives.

A description given by the other traveller Abdul-Razak is more graphic and detailed. He was the agent of the king of Khorasan and had seen the coast of Malabar and travelled inland from Manglore to Vijayanagar. Manglore belonged to Devaraya. Abdul-Razak found the country well-populated. It was fertile and fully cultivated. The empire possessed 300 ports and its extent was from Ceylon to Kulbarga and from Malbar to Bengal. The king was the greatest king in India and was styled, a 'Raya.' He had an army of 12 lacs of soldiers and had a thousand elephants. On his way to Vijayanagar Abdul-razak passed through the Ghats and saw Bellur, the old capital of the Ballals, containing a very beautiful temple.

The city of Vijayanagar was fortified with seven walls and well-guarded. It was 8 miles by 8 in extent. There were gardens, fields and pleasure-houses all round the city, which was thickly populated. The palace, standing on a high ground, was in the centre, from which extended long and broad bazaars in four directions. Pleasing water channels flowed through the streets. There were numerous flower-stalls. The people were particularly fond of flowers. They were also fond of betel-nut and leaf, whose virtues are praised by this

traveller. There were many jewellers who exposed their costly articles for sale in their shops. There was a Court of Justice presided over by a Dand Naik, to whom petitioners applied freely after payment of a nazar. This officer visited the Emperor every evening and gave him an account of the day's works. The palace of this dignitary was behind the Royal palace. The court-house contained the Government records, where numerous clerks used to write on palm leaves with iron styles or on wooden boards with chalk.

There was a mint near the palace where gold, silver and copper coins were struck. Gold was brought to the mint at stated times from the different parts of the rich kingdom. The gold coins were called "Varah" and Pratap'; Panam and Tal were silver coins and the copper coins were styled "zital."

The officers and the army were paid regularly in cash from the treasury. The country was very populous and produced large revenue. King's cellars were full of molten gold. The people in the town were rich. From a nobleman to the lowest workman, people were found wearing costly ornaments.

The principal Magistrate of the city lived near the palace. He had 12,000 footmen under him to protect the city. These men were paid out of a tax on the dancing girls who were rich, beautiful and accomplished. These men knew everything that happened in the city and they were held responsible for any theft. Merchants from all parts of the world were to be seen in the market. Life and property were safe in the kingdom as the king took severe notice of the misdeeds of Provincial Governors.

The king was a pleasing young man, rather tall but of a spare body and olive colour. Abdul-razak had several audiences of the king who inquired about many things respecting the Mussalman kingdoms. The king sat on a throne of gold inlaid with jewels and the walls of the throne-room were covered with plates of gold. The king had a large

harem containing numerous wives and concubines. It was strictly guarded.

While in Vijayanagar, Abdul-razak witnessed the grand festival of Dussera, on which occasion the king received in state his lords and nobles from all parts of the empire and reviewed his troops. Abdul-razak has given a detailed account of this festival in glowing terms. He was highly impressed with the grand show of wealth, power and influence of the king. According to Ferishta, Devaraya sent an army against the Sultan of Bedar in 1443 A. D. The forts of Mudgal and Bankapur were invested. Abdul-razak says that the Hindus were successful and brought numerous prisoners to the capital. Ferishta however mentions that the king was defeated and his son killed. Therefore a treaty was made and the parties agreed to remain within their own limits.

These frontier wars were so frequent that Raichore Doab, comprising the modern districts of Lingsagar and Raichore belonging to the Nizam, was a constant scene of war for 300 years. This tract suffered more or less from these wars since the times of the earliest Chalukya kings to those of Tipu Sultan in the last century. Excepting this triangular tract of country, the empire of Vijayanagar enjoyed peace as is proved by the writings of several foreign writers. In his descriptions of the border wars Ferishta is never satisfied unless he records that lacs of Hindus were massacred. Muhamadan historians are fond of hyperbole. It is clear that these frontier wars were considered as a mere pastime.

Devaraya II after a glorious reign of about 30 years died in 1446 A. D.

MALLIKARJUN or IMMADEVARAYA  
(1447-1467 A. D.).

The eldest son of the last king by his wife Sinhadevi. Very little is known about this reign; the Mussalman historians do not mention any war during it. His chief minister was one Timmana Dand-Naik, a Shri Vaishnava, whose grants are found in Mysore. This king had paid a visit to



- "Narsing" of Penugonda, who was a vassal of Vijayanagar, but established his own dynasty there later on. This king had a son named Nandraj, but he does not appear to have succeeded him.

VIRUPAKSHA (1467-1485 A. D.).

He was the brother of Mallikarjun. This appears to be a weak king and lost parts of his kingdom in wars with the Bahmani kings. Just at this time the Bahmani kingdom was administered by Malik Tujar, the ablest Mihamadan statesman of the Deccan, otherwise known as Khaja Khan Gawan. This minister not only improved the internal affairs of the Bahmani dominions, but extended the limits of the same by fresh conquests. In A. D. 1470 he conquered the Maratha princes of south Konkan and invaded Goa and took it in 1471 from Vijayanagar. King Virupax ordered the commanders of the forts of Belgaum and Baulkapur to send armies to recover this valuable possession, but these plans were frustrated by Khaja Gawan who invested the fort of Belgaum and took it after a long siege in 1472. Belgaum and Goa were never again recovered by the kings of Vijayanagar.

Virupax also had troubles on the east coast which was invaded by the Gajpati king, Purushottam-dev of Katak, who was repulsed by Narsing, a petty chief and principal commander of Vijayanagar. A few years after this, Narsing had again to fight with Mahamadshah of Bedar who penetrated as far as Kanchi devastating the country. This Sultan died in 1481 after murdering his faithful minister Khaja Gawan in a fit of anger. Political intrigues were rife at Bedar and therefore Eusuf Adilshah, the commander of the Mussalman forces, who was fighting with Narsing near Masulipatam returned to Bedar. King Virupax tried to take advantage of the troubles in the Bahmani kingdom by sending an army to recover Goa, but Eusuf Adilshah defeated this object.

It is not clear when Virupax died. It appears that he had no issue and a boy was adopted from Penugonda and named Proudha-Devaraya.

PROUDH—DEVARAYA III. (1485-95 A. D.)

From old chronologies called 'Rayal Paddhaties' we learn that the dynasty of Bukka came to an end in Shaké 1407 (1485 A. D.). That dynasty ruled for 150 years. Afterwards the "Kodwaru" (Vassals, of the Rayalus (Emperors) succeeded to the throne and the first king of the new dynasty was Proudha Devaraya. This prince was a minor and ruled for 12 years. Ferishta says that in a war with the Mussalmans in A. D. 1494, the young king was wounded. This king was murdered by his Commander and Minister "Himraya," (which is a corruption of "Narsinharaya") who usurped the throne. Inscriptions of this Narasa who appears to be the king *de-facto* range from 1494 to 1496 A. D. Narasaraya did not assume the title of an Emperor and the new dynasty really begins from the accession of his son Vira-Narsing in 1497. Without further researches, it is not possible to know the real cause of this dynastical change. The kings of the new dynasty proved as valourous as Bukka and further extended their kingdom.

Before entering upon the history of the new dynasty it will be necessary to remember some great political events which happened just at this time. These events had not a direct influence upon the history of Vijayanagar, but upon the future history of India. The end of the 15th and early quarter of the 16th century were remarkable in Indian History for many political changes.

While Vijayanagar changed its ruling dynasty the Bahmani kingdom was altogether destroyed by its own generals. After the death of Khaja Gawan anarchy prevailed at Bedar and Eusuf Adilshah proclaimed independence in 1489 and established the famous kingdom of Bijapur. His example was followed by Nizam-ul-Mulk who founded 'Nizamshahi' of Ahmadnagar in 1490 A. D. Similarly the kingdoms of Berar, Bedar, and Golkonda were established within a short time. Thus the Bahmani kingdom was dismembered. The history of the Deccan during the next two centuries is a

record of wars between these five rival kingdoms in which the kings of Vijayanagar also participated. The combined Mussalman kings destroyed Vijayanagar and afterwards themselves fell victims to the Moghuls of Delhi.

About this time the Moghuls invaded Northern India and Baber laid the foundation of the great Moghul Empire of Delhi. This conquest by the Moghuls united the different Muhamadan kingdoms of Northern India into a solid empire. Another event far more important in its consequences than this was the coming of Vasco-de-Gama to the Malbar coast. This was the beginning of European settlements and conquests in Asia. The Emperors of Vijayanagar had much to do commercially and politically with the Portuguese who occupied the western coast and controlled all the foreign trade by the sea.

V. R. NATU.

(To be Continued.)

#### ON THE IMPORTANCE OF MOUTH HYGIENE.

THE importance of this subject must be evident to any one who pauses for a moment to think of the relation of the mouth to the general digestive system. From its situation the mouth may aptly be likened to the port of entrance to a great inland sea. But the mouth is more than a port of entrance, it is the great storehouse where the food is deposited for a brief period, and, after undergoing certain changes, is passed on into the great reservoir, the stomach, there to be further dealt with and elaborated and prepared for absorption and the nourishment of the whole body. The part played by the mouth may be compared to the duties of the Custom House, that is to say, everything in the way of food or drink, has, under ordinary circumstances, to pass through a receiving office, the mouth, before it is admitted further for distribution to the system generally, and as the Custom House officers search all

goods, merchandise, etc., allowing some to pass and rejecting or detaining others, so the mouth with its delicate nerves of taste subject everything put into it to a searching examination, and is always on its guard, lest anything unpalatable or injurious should be permitted to pass on for distribution and assimilation. Of the various structures that are comprised in the term mouth those that attract most attention are three *viz.*, the teeth, the gums and the tongue. Each of these structures plays an important part in the complicated actions that take place in the mouth and which taken together form the first phase of the digestive process. I have omitted any reference to the other structures that are contained in the mouth such as nerves, muscles, blood-vessels &c., as they are outside the scope of this article. In the human being the teeth are especially made for the purpose of masticating and disintegrating food that is placed in the mouth, and as man is a carnivorous animal, certain of the teeth are made for the express purpose of dealing with the carnivorous foods that are subjected to their action. This disintegration and pulping of the food by the teeth, assisted by certain muscles, is the first and a very important part of the general digestive process. It is therefore, necessary that in order to perform these functions of breaking up and pulping the food masses so as to prepare the food for the action of the various secretions of the mouth that the teeth should be in a healthy condition. Now a typically healthy tooth is one in which no crack, fissure or dent or irregularity of surface exists—the importance of the absence of these cracks, fissures etc., being the fact, that the mouth is a splendid incubator of germs of various kinds, in fact for germs of any kind (the conditions existing continuously in the mouth *viz.*, the moisture, the heat, and the fact that organic matter of various kinds is constantly present in the mouth, make the mouth an ideal incubator of germs) and that it is necessary for these germs to find a lodgment or resting place where they can develop and carry on their life's work. The polished, smooth surface of a healthy tooth gives no

resting place for these germs, but the cracks and fissures, however minute and microscopic they may be, are the very places where the germs can thrive and flourish. Bearing in mind the fact that each individual germ is endowed with life and has definite functions to perform, and that, therefore, it has a regular cycle to complete before it, like everything else that is endowed with life, dies, we can easily grasp the fact that to enable the germs to carry on its life's work, it must have food, and suitable food. This food is found in the various organic substances that are constantly present in the mouth in the shape of secretions of several kinds, the food that is from time to time introduced into the mouth and the debris that remains in the mouth after the food has been passed on to the lower digestive tract. As a result of the favourable conditions that exist in the mouth for the growth of germs, once they obtain an entrance or foothold on a tooth they flourish and perform their functions vigorously. The most important function that the germs that favour the minute cracks and fissures on a tooth perform, is the setting up of fermentation in the course of which lactic acid is formed. Now a tooth, as most of us know, is made up of certain ivory-like material called dentine which is protected by a polished glistening outercoat or enamel. This enamel consists entirely of calcified material into which no organic matter of any kind enters. The dentine is a vital structure, that is to say, it is supplied and nourished by blood-vessels and nerves, and organic matter enters into its composition to the extent of only from 18 to 20 per cent, whereas the enamel is an inorganic structure the use of which is to protect the dentine. The lactic acid which is formed by germs lodging in any of the crevices, fissures or cracks which are so often seen on teeth has a destructive action on the enamel, the effect being one of decalcification or, to put it plainly, an eating away of the protective coating of the dentine, whereby the dentine is exposed to the action of the lactic acid and its mineral matter abstracted; and to expose the

matrix or core of the dentine to the action of the germs which complete its dissolution. This process is known as Caries and is the most commonly met with disease of the teeth and so of the mouth.

The important part played by the absence or presence of Caries in the production of that state of general bodily health, known as fitness, is not sufficiently recognized. A man or woman with good teeth has, as a rule, good digestion. He is able, other things being equal, to thoroughly masticate and prepare the food he puts into his mouth so that he will get the utmost value out of it later on when it is subjected to the other processes of digestion. The presence of Caries means the existence of a large number of germs of various kinds, and what is more important than this, it means that the conditions present in the mouth are favourable for the growth of bacteria generally and, as a result of this, a certain number of germs and their obnoxious products are mixed up with the food, swallowed, and thus introduced into the system. This introduction of germs of various kinds and their excretory products through the digestive tract into the general system is a fertile source of digestive and other troubles, and attention has been drawn recently to a certain form of diarrhea and other digestive troubles grouped under the head of indigestion which owes its cause to the presence of Caries teeth. With regard to the germs which are subject to a comparatively small number of diseases, the chief amongst them being ulcerated gums or Rigg's Disease (so called after Dr. Rigg who first drew attention to the important part ulcerated gums played in the production of various diseases of the digestive system) the chief interest in them, from the point of view of this article, lies in the fact that, unless the mouth is kept clean and in a healthy condition, the anatomical relations of the gums to the teeth favour the production of Caries by being naturally a suitable situation for the lodgment of the germs that produce Caries,

With regard to the tongue, as far as this article is concerned, the chief interest lies in the appearance of its upper surface, and the information this appearance conveys as to the state of the stomach and in some cases of the lower digestive tract from the stomach downwards. A clean tongue, morally as well as physically, is a thing to be desired, and not rarely does there appear to be some correlation between the conditions. The coating which is seen on the tongue very often in the presence of carious teeth points again to the fact that unclean and carious teeth can and do produce certain diseases of the digestive system, which, if more attention were paid to the hygiene of the mouth, we would see less frequently than is the case at present.

Bearing all these facts in mind, then, it is evident that the care of the mouth is most important to every one who values his or her general health. Strict attention to Oral Hygiene should be taught to all children, and the daily use of the tooth-brush, as early as possible, should be insisted on. Not a mere perfunctory rub with the brush, but a systematic brushing of both surfaces of each tooth, once every day, as a rule, but twice a day morning and evening would be better still. The brushing should be accompanied by the thorough rinsing out of the mouth with some mild, unirritating antiseptic fluid, preceded by the application, by means of the tooth-brush, of some finely powdered, gritless dentifrice or tooth-powder. In the use of such a tooth-powder it should be always borne in mind that, unless the powder is perfectly smooth, and free from any grittiness, its use will do more harm than good for the reasons mentioned above in connection with the lodgment of germs in minute cracks and fissures in the teeth.

The use of the toothpick also should be encouraged, as by this means particles of food which escape removal by the brush and which become lodged in the interstices between the teeth and between the teeth and the gums can be successfully removed. Instead of the toothpick some author-

ities recommend the use of a strand of floss silk, which should be kept soaked in some mild antiseptic, and, after each meal, this should be passed systematically between each tooth and if used with a gentle up-and-down movement will be found to readily remove all particles of food &c., that may become lodged between the teeth. A visit to a dentist at regular intervals, say once every 3 or 6 months, to have the teeth gums overhauled so that the early signs of Caries or any diseased condition of the gums may be detected and remedied in time will more than repay the little trouble of doing so. And, in connection with this point, the writer emphatically condemns the use of the gold cap that dentists often recommend as being one way of saving a tooth; and for this reason, the best made gold cap in the world cannot be applied so closely to a tooth as to prevent the minute organisms which are always present in the mouth from finding a suitable lodgment between the tooth and the cap. This lodgment space, however small it may be, is quite sufficient to give what the germs require for their thriving and development, and, as previously pointed out, once a foothold has been obtained by these germs the process goes merrily on—fermentation, lactic acid production, decalcification of enamel, exposure of dentine and finally dissolution of the matrix or most vital part of the tooth.

With regard to the gums the same remarks apply to them as to the teeth, the rinsing of the mouth and so the bathing of the gums with some mild antiseptic fluid being sufficient to keep them healthy, provided the teeth which are so intimately connected with them are in a healthy condition. There is just one point that it is well to bear in mind, and that is, when using a toothpick care should be taken to injure the gums as little as possible. This may be ensured by using a properly made tooth-pick of quill. A tooth-pick made from any metallic substance, be it of gold or silver or what not, should not be used; such toothpicks are not sufficiently flexible and often injure the gums while being used, and any injury to the gum

will at once afford a lodgment for the germs which abound in the mouth. With regard to the tongue the act of rinsing out the mouth with some mild antiseptic fluid causes the surface of the tongue to participate in the general cleansing. The thick sticky coating that is often seen on the surface of the tongue, particularly after indiscretions in eating and drinking, often is responsible for the offensive odours that emanate from some mouths. To remove it, resort must be had to suitable therapeutic medication under the guidance of a physician, and the use of a tongue-scraper to remove mechanically the mass of thickened and evil-smelling secretion which forms the coating on a dirty tongue. In this country where the cleanly and wholesome habit of rinsing the mouth after each meal and of the cleansing by brushing, either with the finger or some suitable appliance is universal, good sound teeth are the rule. This fact *viz.*, that natives as a rule have good teeth, has been set down as due to the number of vegetarians amongst them. This is not so; a vegetarian's diet contains a large amount of starchy and saccharine matter and it leaves debris in the mouth between the teeth and also between the teeth and gums, just as in the case of the flesh-eater, and indeed the soft pulpy food which is characteristic of a vegetarian diet is more likely from its nature to favour the growth and multiplication of the enamel-dissolving germs that produce Caries. But the cleanly habit of washing out the mouth after each meal prevents the lodgment in the mouth and between the teeth and gums &c. The early use of the tooth brush and the cleanly and eminently wholesome habit of rinsing the mouth after each meal should be taught to children from their earliest years, as apart from considerations of health, the cosmetic value of a good set of clean sound white teeth is a valuable addition to the various other features that go to make up a pleasant face.

H. W. McCauley Hayes.

## INDIAN JOURNALISM IN THE NINETEENTH CENTURY.

JOURNALISM is as much an exotic in India as the Railway, the Telegraph or the Representative Government. It is useless to speculate whether, if native rule had continued to this day with the new kind of civilisation growing around it, journalism would or would not have found its way into India, though the probability seems rather to point the latter way. Not that there is no good soil in the intellect of this country for the seed of journalism to germinate; but the political atmosphere till the nineteenth century was not congenial enough for the plant to thrive. Even at present, with the British rule encircling them, the Native States are reluctant to tolerate the newspaper press. The Princes dislike it and the Political Agents foster the dislike. We do not, however, mean to say that the people were, or are, less happy under native rule for the want of journalism. Far from it. We know it is quite possible for a free nation to live and prosper without newspapers, just as it can live without many other things which bear the hallmark of the 19th century civilisation. The England of Elizabeth without the Railways was certainly not more glorious than the Maharashtra of the Peshwas without newspapers. But as an accompaniment of the British rule to which we are subjected, and of the entirely new order of things brought in its train, it is impossible not to appreciate the usefulness of journalism—the new agency of political education.

The printing type was first introduced into India in the late sixties of the eighteenth century. But from that to the dawn of Indian journalism was a long way off. The pioneers of journalism in India were foreign adventurers who, it was said with somewhat unjust severity, were "found unfit to engage in any creditable method of subsistence. With the halter of censorship round their neck, they had a perilous career; and their struggle for securing liberty for the press deserves grateful admira-

tion. The first native newspaper was started in the year 1818; and in 1833 when the system of licenses and restrictions was abolished and complete liberty was given to the press, native journalism was, it may be said, yet in its swaddling clothes, though a man like Raja Ram Mohun Roy had already come forward as an editor. Indian journalists had not thus to do much in the beginning of the 19th century by way of fighting with the official enemies of the liberty of the press. They had that precious blessing ready earned for them by fightful Anglo-Indian journalists and large-minded Anglo-Indian statesmen. Things would seem to have been reversed by the end of the nineteenth century; and while the Anglo-Indian journalists and statesmen have begun to look upon the liberty of the native press with disfavour, it seems very likely that what struggle and fight was spared to the native journalists when that liberty was first acquired, they will have now to make for preserving it from the stealthy as well as the avowed encroachments of law.

Well, the liberty of the press did not bring any immediate improvement in the quality of Indian journalism. It was not, of course, to be expected that it would. For the orthodox kind of education was not very well calculated to give an impetus to journalism; and the new kind of education was yet to spread wide and deep among the people. It was only in 1857 that the Universities were established, and nearly a generation had to pass for the fiery leaven of western education to work up in the native mind the desire to take part in politics. A flourishing condition of journalism necessarily requires a large class of people desirous of imbibing political education, and a small class at least of men competent to give it. The bulk of the first generation of educated men, however, were attracted by the dignity and the emoluments of Government service, and there was also ample room for them there. Departmental restrictions, however, were in those days less comprehensive than now; and Government servants could

mix themselves in public movements without causing serious displeasure to Government. It was, therefore, when this first generation inaugurated public political work and the second generation supplied a few men who could strike for them an independent course of life, that Indian journalism began to assume a vigorous and respectable character. Politics is the soul of journalism; and even in the most advanced western countries where journalism has reached perfection, what percentage of newspapers are there which are devoted to purely religious or scientific, or industrial education?

With the limited space at my command, it is not possible to trace the growth of Indian journalism in the different Provinces of India. But a few broad features of this growth may be noted. The progress of Indian journalism in the different Provinces seems to have varied more or less according to the duration of the British rule over them. Thus the Province of Bengal was one of the first to come under British rule, and it is here we find that journalism has achieved greater success than in any other Province. Our Bengalee brethren are head and shoulders over the rest of us in point of literary culture and development; and the Bengal press, taken together and all in all, is in my opinion worthy of the lead it has got. *The Amrita Bazaar Patrika*, *The Bengalee*, *The Indian Nation*, *the Hindoo Patriot*, and *the Reis and Rayyat* in their best days, are specimens of journalism of which even a European nation may be proud. It is also in Bengal that we have vernacular newspapers whose circulation has reached the imposing figure of twenty or twenty-five thousand copies. Turning to the Madras Presidency, we find that, leaving the Presidency town, journalism, either English or Vernacular, has not made much progress. But the two Native dailies in Madras may be said to make ample amends for that state of things. The success of the *Hindu* is simply an object-lesson of what a couple of young educated gentlemen without money, but with brains and perseverance, can accomplish in the line of journalism. It is a daily

paper which Indians may hold up as a fair sample of their journalistic respectability and ability. The *Madras Standard* is highly enterprising, and it has got in it a trait which characterises some of the successful newspapers in England. Turning next to Bombay we see that enterprize has always been lacking among the newspapers in this Presidency; as may be seen from the fact that with so much journalistic talent in the Presidency, not a single English daily has been started till now. There are, however, a number of weeklies in the Presidency town and the Deccan which are as vigorous as they are able and respectable. Among these may be mentioned the *Dnyan Prakash*, the *Native Opinion*, the *Indu Prakash*, the *Indian Spectator*, the *Gujrathi*, the *Rast Goftar*, some as they are at present and some in their best days. It is in the Bombay Presidency alone, moreover, that we have some very successful daily papers in the Gujrathi language such as the *Bombay Samachar*, the *Gujrathi* and the *Kaiser-i-hind*, and some of the most powerful weeklies in Marathi such as the *Kesari*. In point of independence of spirit and vigour of criticism, the papers in the Bombay Presidency generally rank higher, though, as I have said above, the want of enterprise is a thing which must stand against them. In the Berars and Central Provinces which came under British rule somewhat lately, there is not, to my knowledge, a single paper which is fairly representative of the higher quality of Indian journalism, and the dumb millions there have not even that channel for voicing forth their grievances and feelings which a powerful newspaper affords. In the Punjab the *Tribune* is doing good service; and the days of that paper under the able editorship of Mr. Gupta are very well remembered by readers even in Provinces other than the Punjab. The *Phoenix* is the solitary paper in Sindh, which was so far, indeed, the most backward Province in India, but which is now coming up with marked vigour. The prospects of even a daily newspaper in Sindh, are, I am told, unbounded. But somehow the Province has to pull on without a journal

that will do it justice. In the N.W.P. the *Advocate* of Lucknow is doing the work in the public cause almost single-handed; but when even cities like Allahabad and Benares must go without a good Native newspaper, there is evidently much left to be desired in that Province in the direction of journalism.

There can, perhaps, be no standard by which we may say that in order that the needs of a Province or a community may be adequately met it ought to possess at least a particular number of newspapers. Much depends upon the *quality* of newspapers. And while a single daily newspaper conducted with ability and independence of spirit and enterprise may go a long way and serve a whole Province satisfactorily, on the other hand, a host of ill-conducted newspapers may accomplish but little, as they will probably attract little notice, much less command the respect of the rulers or even of the educated Native public. In 1896, however, there were 647 periodicals in Bengal, 123 in the N.W.P., 200 in Bombay and 111 in Madras. From these, however, we must deduct the number of Anglo-Indian newspapers, purely literary or religious or scientific magazines and such other miscellaneous journals. The remainder can hardly be said to be an adequate number of Native newspapers to do justice to the vast concerns of 300 millions.

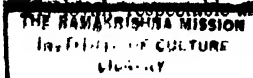
Another remarkable feature of Native journalism is that, while the Vernacular newspapers are numerically superior, the real strength and ability of Native journalism lies in newspapers conducted in the English language. The fact is very significant. Native journalism has a two-fold object; one is to attract the attention of Government and to appeal to them for redressing public grievances; the other is to educate the people and to eventually create public opinion. The former object has been evidently regarded so far as the more urgent; and the best energy and talent in Native journalism has manifested itself through the English language. It was the language of the Universities, and the

language of the higher educated classes. There was also another but a less creditable reason; the Vernacular was shamefully neglected, and the best of our graduates and learned men could not during the earlier years, write the mother-tongue so as to do themselves or the language any justice. Things have, however, changed. The second object of journalism *viz.* educating the masses and creating a body of public opinion is only of late gradually coming to the fore-front, and our educated men have begun to take delight and feel honour in doing a natural duty *viz.* improving their mother-tongue and making it more their own. But howsoever we may improve and be able to command our vernaculars, the great need for writing in English would never disappear. In a letter to Mr. Meredith Townsend who had inquired why able natives should publish in a foreign language instead of making a literature of their own, Babu Sambhu Chandra Mukerji, one of the most famous and brilliant journalists of Bengal, had replied in these words:—“We might have created one of the finest literatures in the world without making any impression in the camp of our British rulers and of course without advancing our political or even social status. Nay, the truth is we *have* created a literature and very respectable literature it is. All that copiousness and all that wealth, however, has not helped us one whit or rescued us from degradation. Hence we are compelled to journalism and authorship in a foreign tongue, to make English a kind of second vernacular to us if possible. You have no idea of the enormous personal sacrifice involved in this. English does not offer us an earnest of future. It is those that cultivate Bengali that will be remembered by their countrymen. But we who write in English have to make this sacrifice for the fatherland.” Sambhu Babu’s explanation has much truth in it, and it will undoubtedly be appreciated by those who are, like him, doomed to carry on journalism in English.

Good journalism can only be made by good journalists, and one of the first requisites for a

good journalist is that he must pursue journalism as a profession. Professional journalist is a class which in India is yet to be permanently and distinctly created. That will come by and by. But the roll of even amateur or rather semi-professional journalists which India actually possessed during the nineteenth century is one of which she may be proud. I fear I shall not succeed in making an exhaustive list; but I venture to offer the following as a provisional list which may certainly be improved upon, but only by addition to it. To Bengal belong Raja Ram Mohun Roy, Babus Harish Chundra Mookerji, Kristo Dass Pal, Rajkumar Sarvadhikari, Krishna Kaval Bhattacharji, Sambhu Chundra Mukerji, Shisher Kumar Ghose, Motilal Ghose, Padshah, N.N. Ghose, Surendra Nath Banerji, and Norendra Nath Sen. Madras can claim Messrs. G. Subramaniya Iyer, Viraraghvachari, Shankar Nair, Natarajan, Karunakara Menon and P. Pillai. To the credit of Bombay may be cited Messrs. Dadabhai Naoroji, M. G. Ranade, Mandlik, Gadgil, J. S. Permanand, Malabari, Chandavarkar, Wacha, Bhatavadekar, Khare, N.V. Gokhale Padhye and Samartha; and Deasi and Shroff and to that of the Deccan Krishna Sastri Chiploonkar, Mr. Vishnu Sastri Chiploonkar, Professors Tilak, Agarkar, Vasudevaram Kelkar, G. K. Gokhale, S. H. Chiploonkar and M. R. Bodas. In Nagpur we had Mr. Pundit and in the Punjab Mr. Gupta. While in the United Provinces may be mentioned Pandits Bishen Narayan and Ganga Prasad Varma. This is a galaxy of journalists who have by their brilliance shed a light of glory upon their country, and who, under more favourable conditions of political life, would certainly have come up to a higher level as publicists than they at present occupy.

Various have been the estimates made of native journalism. If on the one hand we have it described as a “brood of vipers hatched out on the Congress dunghill by the rattle-snakes in the form of sedition-mongers,” on the other hand we have testimony to the effect that the native press is thorough-





controlling force in the country. It is difficult to reconcile the two estimates. But we can explain the difference when we understand that the first estimate is now made by Mr. Arthur Crawford, the Prince of corruption in the Civil Service, and the latter is by some of the best British and Anglo-Indian statesmen. It may be said, at any rate, that Native journalism has now outlived that stage of growth in which opposition and want of self-confidence act as the outward and inward enemies of any institution. Native journalists have now begun to feel that they can make journalism not only a respectable but a remunerative trade, and, what is more, that they can command even some of its higher fruits, such as the formation of public opinion and the influencing of the actions of Government in an appreciable manner. It is not now unoften to find Native opinion, as expressed through the press, quoted or referred to by the members of Legislative Councils and even the Governors or the Governor-General. No doubt such a compliment need be expected only when the Government is conscious of its need of strength in a contest against the State Secretary, for example, or when shrewdness counsels that much capital can be made out of a casual coincidence between the Government and the people, by way of showing off to the latter that their opinion is treated with some regard. But whether Government may or may not sincerely like to consult Native opinion, by their conduct at least they admit that on principle they ought to. It is not, in the present condition of Native journalism, a small compliment to it that it should be given credit for inducing Government to at least such courses of action as they are already determined upon.

I will conclude by noting only one more point. Though Native journalism is now on the high road to improvement and progress, still it must not be forgotten that this progress has a limit on account of the peculiar conditions of the country. Politics, as I have observed above, is the soul of journalism ;

and so long as we are politically at the foot of the ladder, the enterprise and progress of our journalism must stop at an ascertainable limit. A moment's reflection will shew that the province of things which is likely to interest our people is small and confined more or less to India. We have no Colonies and no dependencies out in the world ; and even within India our interest can touch but the fringe of the vast administrative problems. In England, for instance, however, they live and breathe politics and nothing else. As Addison has somewhere remarked, almost every age, sex and profession among the English people has its favourite set of ministers and scheme of government. Their children are initiated into politics and factions even before they know their right hand from the left. They no sooner begin to speak, but Liberal and Conservative are the first words they learn. But in India, our interests in the country's administration are extremely limited ; and as a writer in the *Pioneer* had remarked three years ago, "people found papers to promote certain interests but not with the object of spreading abstract truth." In England the main business of a paper is to champion the cause of one or other of the great political parties *which hopes one day to come into power*. But in India political power is almost a forlorn hope, and it is clearly understood by the Government, and by the people even more than the Government, that a despotic Government, as the one in India, cannot possibly be shaken by newspaper criticism. Government may be disposed to rule the country in the interests of the people ; but they are determined that the only condition of such a rule will always be that they, the rulers, and not the people will be the sole and ultimate judges as to what is and what is not in their interest.

Subject to the limitations implied in the above state of things, the field of progress for Native journalism is unbounded ; and as a member of the fraternity of journalists, I wish hearty success to it in the smiling dawn of the Twentieth century.

N. C. KELKAR,

## FAMINE OR NO FAMINE.

"There is a poor, blind Samson in this land,  
Shorn of his strength, and bound in bonds of steel,  
Who may, in some grim revel, raise his hand,  
And shake the pillars of this commonweal,  
Till the vast Temple of our liberties,  
A shapeless mass of wreck and rubbish lies."

—Longfellow.

## FLASH THE FIRST.

*The Drought.*

**W**ATER! water! The sweet *mallika* withered on the sheltering stem. Her followed her companions, the delicate *kunda* and the fragrant *champak*.

Water! water! The beasts of the plain lifted their weary eyes and looked about in vain for a draught of water to quench their thirst.

Water! water! The plains grew dry and bare. The earth grew angry hot, for her children found nought to drink.

Water! water! The bark flew off the thirst-trees; their stately trunks cracked and their leaves, dried and scorched in the April sun, fell and died. And not a breath of wind sighed to see them die.

Water! water! The hill-tops looked yellow and red. The grass on them was withered; and shrubs and brushwood were ruddy in their blighted growth.

Water! water! The Mountain Stream stopped in its joyous course to the sea, and, while loitering on the way, was swallowed up by the thirsty shores.

Even the Stately Kodashadri\* stopped midway in its ascent to Heaven and disdained to bespeak the favour of Indra, whose back was turned upon the Land of the South.\*

## FLASH THE SECOND.

*The Benevolent Ruler.*

Collector Simpson was popular. And he was wise besides. He wanted to see whether his so-called popularity was real in the rural parts as well. Ever since the remittance of that grazing-tax on cows, the landlords were giving him public addresses wherever he went on his tour of inspection, and were calling him their beloved Collector and the benefactor of the people. In the former Collector's regime, there was a small tax of annas four per head of cattle that were sent to graze on the public fields.

Soon as Simpson arrived, they petitioned him to do away with that loathsome tax. And with the generosity of an Englishman who was freshly arrived

from 'free' England, Simpson took proper measures to have that tax remitted in future. Farmers and householders were thus free to possess as many cattle as they liked and to send them to graze on the public waste-lands. It was a humane measure, so said everybody, and there were rejoicings and congratulations on all sides.

Simpson was pleased. He was flattered at the thought that he could bring happiness to the people entrusted to his care. The villagers came to him to please him with exhibitions of peaceful plenty. The streets were decorated with flags and strings of mango leaves. The village grandees came to receive him in their best costumes. At the triumphal arches that were erected in his honour, he saw a grand variety of fruits and a profusion of palm-leaves. He was in the Golden East. He was the ruler of a faithful country. His people were happy under him. He drank eagerly the praise and childlike admiration bestowed upon him. They called him "our popular Collector" "a friend of the people," "our beloved Collector" and by many an endearing epithet besides. And in his conscious-ness, Simpson could not help thinking that he deserved it all.

His first tour over, the drought set in. The fields were bare. The scythe was idle. The ryot was starving. But money came in as usual at the annual *kist*.

Another year passed. Still no rain. There were vague rumours of a Famine. It was Simpson's third year of office. Three years in one of the hottest parts of India was indeed a trying business. Simpson was thinking of enlarging the garden attached to his bungalow. And by working the water of a well up into an elevated tank, and keeping up a system of pipes, he managed to have a delicious fountain opposite the bungalow. In the nasty hot weather, especially in India, punkahs were indispensable. And oh! to sit beneath a punkah, to be fanned by the automaton punkawallah was indeed not the best of blessings, but it was an incentive to go oftener to sleep in an armchair and dream of the old, sweet home in the far, far western.

The third *kist* arrived. Now, rumours came afloat that collections would not be forthcoming. The fear of an empty treasury roused Simpson from beneath the punkah. He was accustomed to see peace and plenty appear whenever he set his feet in the rural villages. He resolved to try the experiment once again to see whether an Englishman's presence could not make brighter the sunny clime of the Golden East. And Simpson started on his second tour.

\* A peak of the Western Ghats.

## FLASH THE THIRD.

*The Pleb.*

"Shiddoo, have you got any grain to spare?"

"Only a little, brother; but you shall share it with me."

Timma was silent.

"Tell me you are not starving on my account?" he asked.

"And if I starved" replied Shiddoo, sadly, "is not my brother starving with me? That is consolation enough."

They both looked at each other. There were tears in their eyes. These men were not sprung from the same parent except she were Mother Earth. And yet a friendship existed between the two which amounted to more than a kinship. They were gaunt, almost naked fellows. A simple strip of cloth between the legs spared them that dishonour. In a sheath made of rope and hanging by the girdle, also made similarly of rope, which circled their waists, they carried a bill with a wooden clasp to it. Their forms were tall and manly. Work in the open fields had given the grit to their muscles. But their skins were dark.

"Come," said Shiddoo. They entered a low hut in an adjoining field. It was built entirely of bamboo and palm leaves. No mud wall existed. They entered it. Three children ran to meet their father and Shiddoo took the youngest in his arms and after having kissed him left him hurriedly on the ground.

There was a small half-empty bag in a corner, Shiddoo went up to it and emptied half of its contents on the ground. Two seers of ragi—share it, Jonathan!

"Oh brother!" exclaimed Timma, "You have but little indeed. No, put it up, put it up; what will you do when your portion is spent?"

The children gathered round the grain, their greedy eyes told how much they were in need of it.

Timma was retiring without touching the kind gift. The farmer's wife then came in with her earthen vessels cleaned. She was a kind woman. She looked at Timma, then at her husband, at the grain lying idly open and then at her children. Tears started to her eyes and she understood it all.

"He would not take it," it was not necessary for Shiddoo to explain, "he would not take it because, he says, we have so little."

At length, though poor themselves, they forced half a seer of ragi upon the poorer Timma, who went home weeping to his starving wife and children.

"It is over," said Timma, four days later.

"My wife is dead." His eyes were blood-shot. His face was grim.

It was vain to ask what she died of.

The poor woman had starved herself that her children might have their bellyfuls.

Timma and Shiddoo were without food for two days.

Shiddoo asked: "Did you go to our landlord?"

"Yes" was the reply. "He could not help me, he said."

Shiddoo pondered. Then, "Are they not feeding Brahmins to-morrow?" he asked.

"But we are not Brahmins," said meek Timma.

"Nay. But we work for them."

"We do."

"And now we starve for them!" said Shiddoo, with a fierce light in his eye.

Then both were silent. They could say no more. A spell seemed to be over them. Religion came with her terrors, and threatened impiety with—Hell!

After an interval of five minutes, Shiddoo asked, "Have you got tender cocoanuts in your fields?"

"No; but why?"

"The *Dorai* is coming."

Timma groaned.

"The patail's man was here to give notice of the Collector's visit. He asked me to be ready with my share of evergreens and *anjurs*\*."

"What will you do?" asked Timma.

"Refuse," said the other, curtly.

"Refuse a Collector Sahib?" Timma's face plainly expressed his terror. Even Shiddoo was cowed at that thought. For he remained silent. And then they parted.

## FLASH THE FOURTH.

*The Pleb (continued).*

"My children! My children!" The great, big man, who could toil from morn till night on the tropical fields, wept as he folded his offspring to his breast and felt that he could give them nothing to eat.

"Father, father! I am hungry, I am hungry," cried the children in return. And he was hungry too. He could not borrow any grain from the neighbours. They were like him, and like him, helpless over a vast expanse of sundried desert.

The gods of rain were not kind. The earth was not kind. The trees were not kind. And Man—were *they* his kind?"

Then a thought struck him. May he not beg for food in the nearest town—say from his land-

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\* Presents, generally to a superior,

lord? Begging was ignoble, except for the Brahmins. He had never begged before this. But he would try. If men were half his kindred that they were reported to be, they would take pity on him and his. Even he was a child of God, of Brahma, though sprung from his feet and condemned to toil. They would take pity on him, as many of them as were really God's children.

He wept as he remembered the vacant place by the hearth, remembered that humble woman who, till so late, was a partner of his humble life's small joys and great sorrows. And there was a leaden thud at his heart as he led his diminished household to the supposed land of plenty, the Taluq Town.

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## FLASH THE FIFTH.

*The Patrician.*

He was a big pompous man. He was rich. He owned many lands, the world respected him for his wealth. And with the logic of those people who flatter a Government that its subjects are happy because they send uncountable stores of wealth to its Treasury, Madhav Rao's friends used to flatter him that his tenants were happy people, if they could send annually their rent which was considerably high, without leaving arrears. Madhav Rao collected his rents with scrupulous exactitude and was indifferent to the ryots' mode of raising the rent, so long as the money came to him regularly. The result was, his tenants were mostly running into debt during bad seasons. They just managed to pay his dues and to maintain themselves and their families during full harvests. But Madhav Rao, what mattered it to him how the money came into his pockets? What he claimed was his birthright. If it was a little hard on the tenants, he dismissed the thought of their condition by a little philosophy about the unalterable decrees of Fate, etc.

Madhav Rao had estates in three districts, some above and some below the Ghats. His granaries were always well-stocked, and no wonder. Oh, his tenants are so happy, said the people. Whoever said that there was famine in the land was a gross fool. Madhava Rao annually exported large quantities of corn out of the country. Talk of famine, forsooth! There were other landlords besides Madhav Rao who also managed to export corn, though on a smaller scale. That famine could be believed to exist in that corn-growing country which, besides, managed to export large quantities of corn year by year, was of course ridiculous in the extreme. Madhav Rao and his friends thought so. The Government thought so. Even distant foreigners thought so.

The Indian ryot only—and he was a self-willed, dogged and ignorant fool—thought otherwise.

The fact was that if Madhav Rao, instead of exporting\* the corn, had sold it to his own people, the price of corn would have been lowered. A larger supply of corn in the native retail markets would have been a boon to the famine-stricken people. The labourer might have benefited along with other consumers of corn. As it was, however, the foreigner had the grain all too cheap. It is true the landlords got from him more than what they could get at home. But Free Trade, while benefiting a small minority of the population and making them richer day by day, was crushing the very labourer down to dust, that labourer whose unwearied hands had served in bringing forth the plenteous crops of happier times.

Surely, bread is not to the industrious, nor the feast to him who has prepared it, neither yet the eating to the cook, nor yet riches to men who deserve it for their daily toil, nor yet favour to men of patient perseverance and uncomplaining hardihood—but law and custom interfereth with them all!

The famine was not true. The famine was a lie. So said Madhav Rao. He could prove it before the Collector, could show him those well-stocked granaries of his, and point to the green plants in his gardens, specially watered from out of deep wells. So thought Madhav Rao.

There was a grand feast for the Brahmins. For why? A Brahmin seer had presaged a severe drought for the year then current. And to avert it, the rich were *commanded* by that seer to feed the poor—not all the poor alike, but only the *Brahmins*! Well-a-day! that Brahmins alone should come in the way of the whole people! The seer could not see, or so only with half an eye, the way to avert the dread effects of that famine.

Two hundred poor being fed! The news reached the Collector and he was overjoyed to have such benevolent subjects in his district.

The festive preparations were in progress. The Patal and Madhav Rao were concerting measures to receive their distinguished guest.

"So it is arranged about the two rows of children carrying palm leaves?" asked Madhav Rao,

\* The "Englishman" in its series of articles styled "Mr. Dutt on land assessment," cites the instance of the District of Bilaspur, where the introduction of railways and the consequent exportation of corn raised agricultural prices threefold. Those who are acquainted with the notorious slowness with which the agricultural labourer's wages keep pace with the variations in the price of agricultural produce in India can estimate the misery which the exportation of corn entails on the labourers, who, it must be remembered, are in many cases paid in money and not in kind.

"Yes, and they will cry '*Collector Sahab ki jai!*' '*Sirkar ki jai!*' and '*Ram ki jai!*' said the Patail. "And about the triumphal arches?" asked Madhav Rao.

"Humph! only a few cocoanut bunches and plantains have arrived."

"Did none of my tenants send anything?"

"They could not" said the Patail, simply.

"They should! and Madhav Rao broke into an oath.

The Patail explained that it was useless to try with them. He had every tree cut down to furnish palm leaves for the arches. He could do no more. Madhav Rao then offered the services of his garden. And they arranged everything to their mutual satisfaction. Madhav Rao was to give new clothes to his tenants to enable them to appear decently dressed before the Collector Sahab, and a silver coin to each of them in the Sahab's presence on condition that they returned the silver coins promptly when the Sahab should have gone away.

The feast progressed meanwhile. "Har! Har! Mahdavi! Jai! Seetapatani Ram!" cried the satiated Brahmins, unable to eat any more.

What was that noisy clamour outside? It was only a few field-labourers come a-begging. They were asked to go away and not bring their unclean bodies in too close a proximity to the place where the holy Brahmins were feasting.

The meals over, they were chewing betel, the clamour outside increased. Noises of women mingled with the loud complaints of men. A Brahmin came out to inquire into the cause of the hub-bub. He was the steward of Madhav Rao.

"What do you want, my people?" he asked in a tone that plainly showed he was at peace with all the world. He had the grin of a Brahmin, who is satisfied with regard to the cravings of his stomach.

"What do you want, my people?" he asked; and wondered that anybody in the world in this age could be in want of anything.

"Food!" was the hoarse reply of a multitude of voices. A crowd had gathered. Labourers from the country round were pouring into the town, on hearing about that feast for the poor. And there were a hundred voices echoing that cry.

At that instant two lean, half-starved urchins, all bone and no flesh, came forward and prostrated themselves at the steward's feet. The humble obeisance occurred at a rather too close proximity to the Brahmin. And he leapt backwards to escape being made unclean. A retainer of the household, who was by, seeing that the steward was angry,

kicked the prostrate ones off. And a loud howl of anger burst forth from the thickening crowd.

"What makes you go a-begging in this untoward fashion instead of working to earn your own livelihood?" asked the steward.

"Famine!" was the dread reply.

"Listen!" said the representative of the Man of Wealth

"Our lord has been feeding this day two hundred Brahmins, in order to avert the famine of which you complain. The gods have promised plenty for the future. Now that the feeding of the holy men is over, the famine shall not trouble you. Go in peace!"

Volumes could not have told more, or at least to greater effect on that ignorant multitude. They were already retiring and beginning to disperse. But one tall gaunt form stood forth among them and they stayed.

"Stay!" cried the shrill note of Shiddoo: "Will you go before you get food?"

They seemed to hesitate. And Shiddoo spoke once more:

"We want food, and we came here for that purpose. It matters little to us whether Brahmins are being fed or not while we have been starving."

There was a murmur expressive of dismay on the part of the people at this bold heresy. But the speaker went on.

"I say we have been starving for the last few days. Whether Brahmins are fed or not is not our concern. We worked for our lords in good seasons. Let the lords give us part of their grain now that we have fallen upon hard times. We will have food and grain. A full belly is the best test of plenty. Is it not so, brethren?"

They were too much startled to reply in unison, though they understood the truth of his remarks. They were startled at his heresy. He was doubting what none among them had as yet doubted—the efficacy of feeding the Brahmins!

The steward retired and shortly afterwards reappeared with his master. Madhav Rao was just returning from the pleasures of the feast and was consequently benignly graceful in his address. He supremely regretted that he could not accommodate so many low-caste guests that day. If they would come the next day to his house before the Collector should arrive, they might each get a suit of clothes to wear for a day and would also be treated to a dinner before the Sahab. There was indeed no use of their making a row. For the police were always handy at the adjoining station house and the crowd could be dispersed from before the mansion any moment.

"Mercy ! mercy ! my lord !" and a kneeling figure of a new comer looked piteously up to Madhav Rao,—"I come to ask for alms, not for myself, but for these my starving children."

"What !" cried Madhav Rao. "My tenant going a-begging ! explain yourself, man !"

It was Timma with his famished children, come from a distance of six miles. He spoke.—

"Their mother died of starvation, and they—oh !" One of his young ones had fainted from sheer fatigue of the journey, combined with hunger. It was a lesson enough. But Madhav Rao thought it unwise to be soft-hearted before so many. He remembered, besides, the conversation with the Patil and his face grew stern.

"A tenant who pays not the demand of his lord must not seek for alms at the lord's hands," he said with a withering glance.

"What says my lord ?" said poor Timma, "God knows I pay my rent regularly enough."

"Ay, man ; you are right about the rent, no doubt ; but the cocoanuts and plantains." —

"The Patil cut down every tree of them" wept honest Timma.

"You deserve it all !" was the only reply of the proud lord as he swept regally into the pandal.

"Heaven and Earth ! Or was there a heaven above this sordid earth ? The children sank to the ground in despair and Timma who was without food for three days fell down in a dead faint.

\* \* \*

#### FLASH THE SIXTH.

*Where five roads meet.*

They heard him denouncing the idle rich, who never worked, but who were ever ready to swallow the choicest morsels of the poor man's rearing. He appealed to their stomachs, to their sense of injury, to their instinct of self-preservation. And that appeal was stronger than every superstitious fear based on religion and custom.

Religion and custom ! They had learnt to treat both as above impeachment, and here was one of their own colour, one of themselves preaching to them the gospel of heresy and calling on them, if they be men, to help themselves.

That will be a dread time to ye, oh Brahmins, to ye, who rule with custom's iron chains and law's whip-cords, if any more like Shiddoo stand on the spot where 'five roads meet,' and showing every new comer the emaciated and neglected body of a fellow-sufferer, call on him to stand up for and defend what is his own !

It was a simple gospel, that of Shiddoo's ; every mother's son of them understood it. It was simply this. Feed yourself first, your master afterwards—

since you work for both. If not, behold the fate that awaits you, hunger, disgrace and death !

"He was as a brother to me," said Shiddoo and pointed to the body of his greatest friend. I gave him corn even when my own stock was getting exhausted. Every neck was craned to have another look at this Pythias. "And am I to live to see that his death is unavenged ?

They were men feeble in body. They were starving for a long time. But the man in them was roused as they cried "No ! By *Bhavan!*"

Others were pouring in from the country round. Two hundred, three, four, five hundred ! And still they came from the remotest corners of the Taluq. They were coming to meet a welcome at the hands of the Goddess of Plenty. They stayed with their brethren to look at the victim of Famine. This then was the welcome that awaited them ! This was a feast for the poor ! For poor eyes to gaze upon, indeed, not for poor palates to taste. They had been duped, they had been led on a false quest after grain !

Where five roads meet, they heard the fate of poor Timma and his children. Their increasing numbers gave them confidence.

Ere the cry for "Revenge !" rose, the sun had set in the western horizon, leaving the paint of blood on the sky.

There went up that night, to the clear, starlit heavens, the smoke from a dozen well-filled barns ; and the red flames from sixteen hay-stacks shot forth their blood-red tongues and proclaimed the rule of anarchy ! the beacon served as a signal to Collector Simpson who was then only three miles away, awaiting his welcome in the morning, which was to take him to town. He wondered what it could mean. But a courier arrived in the course of the short hours of the morning and told him of the sorry plight of the once fair town of Vasantpur !

Simpson now showed that he was a true-born Englishman. He did not flinch in the fight with this fiend of anarchy which the spell of famine had raised. He did not retrace his steps to the district head-quarters, and leave his subjects to be murdered and mutilated as the rioters pleased. He jumped on to his cycle, after hurriedly dressing himself and sped with an anxious heart, but all alone, to Vasantpur, whose dignitaries had meant to give him quite another welcome.

It was still dark as he entered Vasantpur. But the sound of excited voices, of suppressed shrieks, met his ears and told him that the town was still in its throes. Presently a shriek louder than any he had ever heard rent the air, as a lurid light shot forth into the clear sky. And he saw that a

big mansion was being set on fire. Its inmates were slowly showing their agonized faces at the doorway. And outside were the dark and lean skeletons, moving about on their work of destruction.

"Drag him forth!" cried the tallest and soundest of the skeletons. Fifteen men jumped to the door and dragged out Madhav Rao, now no longer the pompous old grandee of but the day before, but a cowering, frightened, over-fed animal, unable to defend his own threshold.

"Bind him to the tree!" cried out the leader. The women of the house howled and cried. A like howl, and a like cry had gone up to the bright heavens to be registered by the recording angel only the previous day, but then none were kind enough to mind it. But now Simpson stood forth before the crowd, clutching a glittering weapon in his hand.

"Unhand him!" cried Simpson in the native tongue.

"Who are you?" cried the leader.

"Who are *you*?" And Simpson followed his question with a sound knock, from which the assailed staggered, but, recovering, cut at the arm of the Collector with his dull-edged bill.

A sharp crack, and a bullet lodged in the heart of Shiddoo. At the sound of the revolver, the rioters were dismayed and staggered.

Meanwhile the roofing of the big house was on fire. Higher still and higher went the flames. Not a hand stirred. Even Simpson stood as one charmed. The woman sent forth another shriek from the inside. And even they, true daughters of Brahmins, preferred a death by fire to falling into merciless hands. Their cries told Simpson where his duty chiefly lay.

"Rescue the inmates, friends!" he cried. Perhaps a feeling of respect for Hindu households kept him from going in himself.

The flames rose higher. The rioters meanwhile were awe-struck at a white man's presence. But his address went to their hearts. Here then was a Dorai and he was calling them "his friends"!

"I am the Collector!" said he: "go, and you shall meet with your reward!"

As he said this, the northern part of the roofing cracked. In ten minutes, the whole would have fallen, burying and burning the inmates underneath. Simpson scattered ceremony to the winds.

"Ten rupees to every person who aids me in bringing the inmates safely out! Come!"

A hearty ovation of "*Jai Sircar*," issued from their lips as they followed the Collector to the field of danger.

\* \* \*

The next morning ere the frightened towns-folk could well arrange for the reception of their distinguished visitor, the Collector's suite had arrived and the Collector 'himself' was holding a court to punish the guilty and reward the brave.

All the harm done was the destruction of property. No lives had been lost. And Shiddoo was the only person who met with punishment for creating a riot. Simpson pardoned the rest when he looked at their lank figures and angry stomachs. He even gave the rescuers their promised reward from his own purse. He then set on foot a scheme of relief for the famine-stricken people of the Taluk and himself contributed a princely sum. The local landlords were obliged to follow suit. The largest contribution to the Famine Fund of Vasantpur, after that of the Collector Saheb's, was from Madhav Rao.

But Madhav Rao was disappointed when, in spite of his donation, he did not find his name in the next birth-day honours' list. Vasantpur had lost a capable Rao Babadur.

The saddest part of the story is that Shiddoo's good-natured wife, when she heard of the death of her husband, died of a broken heart. Ere the projected relief could reach Shiddoo's children, the bereaved orphans fell a prey to hunger.

FLASH THE SEVENTH.

A metropolitan paper referring to the Vasantpur riot in its news columns, called it

"*A tempest in a teapot.*"

G. ANNAM RAO, B.A.

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### The World of Books.

MY AFTERDREAM, by Julian West:  
(T. Fisher Unwin.)

Of all theories of the improvement of humanity, none is more calculated to rouse furious opposition and suffer from grievous misunderstanding than the socialistic theory. Edward Bellamy's '*Looking Backward*,' however earnestly and plausibly written, has often struck the most sympathetic reader as most transcending the possible and becoming a fit subject for ridicule. No wonder that in opponents of socialism it produces the impression of a wild dream that fails to take account of the fundamental imperfection of man. '*My Afterdream*' is a clever, if somewhat scathing, caricature of the tendencies and notions of the Golden Age as depicted in Bellamy's book. Passing over such unessential but effectual hits as the remedy called *anticlast* for the incessant bruises inflicted upon people by the

network of delivery tubes crossing the streets and the perfect babel of sounds that stun the ear whenever the telephonic arrangements in each house get out of order, we gather one of the main objections of the writer to be that, in the Golden Age there would be the same discontent and the same desire to effect violent changes as we find to-day. Poets and artists will find their genius ill-rewarded by the state, while the only happy people under the new system would be the working men. In fact the more irksome the labour, the shorter will be the working day, and, in a funeral described with much humour, we find five thousand persons employed in the procession! Even at five minutes a day, the working day is felt to be so long in the profession of undertaking that a school called the Cock-Robin-School is actually established where tender-hearted children are from early age taught to practise the rites of sepulture, that thereby volunteering in that profession may be promoted. Then the undue consideration accorded to labouring men also results in the age of retirement from active service being fixed far too early, the state thus having to support in a condition of honoured ease an enormous number of able-bodied and vigorous persons. In fact at every point the social arrangements of the Golden Age break down, the state is reduced to the position of an over-departmentalised chaotic labour-bureau, politicians and statesmen cease to think of large and delicate affairs of state, but are obliged to adjust petty trade disputes, and the office of president becomes so unattractive that there are no candidates at all for it! One of the most widely prevalent popular feelings of the Golden Age is the profound commiseration felt for the poor barbarians of the nineteenth century, and historians and orators are never so pleased as when they are holding up to contempt, though tempered by pity, some mark of barbarism in the conventions and peculiarities of our age.

While allowing that the parody is excellent as a work of art, we are constrained to say that it shows an inadequate appreciation of the hideous miseries of the poor of our day and the reckless luxuries and cruel abuse of power of the rich, — evils that threaten to lead to revolutions and terrible upheavals, if not mollified by statesmen and reformers emancipated from vulgar let-alone theories and animated by heroic enthusiasm and love of humanity. We cannot see much of true sympathy in a frame of mind which can take delight in such a mockery of science as one meets with on pages 188-189 of the book. A chemist meets the hero and thrusts upon him the information that a substance called sulphalcyphosphorpotmethyl enters into

the composition of the disinfectants of the new age, and that it is such a combustible that on a day called Shatter Day, owing to a quantity of nitric acid getting into a reservoir of the boiling liquid, an immense explosion occurred destroying the whole city in a couple of seconds. Again who that is in sympathy with the modern movement towards popular education will approve of the ridicule of the learned dustman on page 192? Mr. Lee, the dustman, being informed of a bad smell coming from a dust-bin, inserts his head into it and, sniffing deeply several times, proceeds to explain the cause of the obnoxious smell.

"Yes, Mrs. Leete, I must have made a mistake. That smell is certainly caused by the presence of toluoethylaldehyde, and the bin requires disinfecting with diploxythyl. The disinfectant I used on the last occasion was triphosfer sulphoxy hydrate on the erroneous supposition of there being tetrally hydrosulphide in the bin. The matter shall have my immediate attention, Mrs. Leete!"

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THE PSYCHOLOGY OF WOMAN, by *Laura Mulhalm* translated by *George A. Elchison* (Grant Richards.)

Among the advantages that might attend the removing of the disabilities of women was reckoned by James Mill the possibility of having a correct Psychology of Women. Under the conditions that obtained till recently, we did not know Women as she was but only as she had been trained to be by her author and disposer. Of late, however, the old conditions have changed. With the change there has been also a change of woman's ideal of life and woman's conception of her own destiny. The modern woman is not content to play the the inferior role she was once taught to qualify herself for. She gets, in many cases, favourable opportunities for culture and she qualifies herself for independent professions. She challenges freely comparisons with man with respect to pretensions till recently regarded as exclusively his. Hence a dispassionate scientific estimate of woman's powers is calculated to be of unusual interest in these days of woman movements. We shall spare the readers of the book under notice all disappointment by saying that such a scientific estimate cannot be expected from it. For that purpose the reader will have still to go to Mr. Havelock Ellis' *Man and Woman*. The title of Psychology of Woman seems to us to be too big a name for what might be better described as "Some Aspects of the Woman Movement." The only contribution of strictly psychological interest is the authoress's classification of women into the *detrachee*, the *cerebrate*



and the *grande amoureuse*. This seems to trench more upon the field of abnormal than of normal psychology. Except this and a loose reference to woman thinking with the spine, criticising by her nerves and judging by her sexual perception, we are not able to recall anything distinctively psychological. How far the book falls short of the pretensions of the title may be seen from the following table of contents. Part I, Chapter 1. Introduction, 2. Three generations of women, 3. Women of to-day, 4. The Demand for Happiness, 5. The History of Women's Illnesses. Part II. 6. The Force of Anxiety, 7. Seekers (six kinds are enumerated.) Part III. 8. The Man Question of the Economic and Psychic Distress and 10. Women's Productive Work. 773

Though the book does not make good its claims to being the psychology of woman, still it throws considerable light on certain aspects of the question. There is a frank recognition of the limitations of woman's powers and the writer's conclusions on Woman's Productive work will be found acceptable to old-fashioned thinkers like De Quincey. The male readers will find much to profit in the book; for their ignorance is, as may be expected, phenomenal, and we would draw their attention specially to the chapter on 'The Man Question'. In the Chapter on 'Seekers,' there is an estimate and a very interesting one, of a lady well-known to us all in India—Mrs. Annie Besant. Whether it is a just estimate we would leave it to our readers to find out. In one of the early chapters the writer dwells on man's ignorance of woman's nature. "Dear gentleman and leaders, do not deceive yourselves and us! Your books are very good, very instructive and beneficial—but what a pity you do not know us in the least! Everything is there in your books; everything except the one spark revealing woman to man and man to woman, that is wanting." We cannot say that the writer has completely succeeded in doing what man according to her has failed to do. We are grateful for the partial revelation vouchsafed to us in the present book and we await with interest the result of the authoress's research in the field of purely sexual psychology.

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A GLOSSARY OF INDIAN TERMS, by G. Temple. (London, Luzac & Co. and Thacker Spink & Co., Calcutta. Price 7-6.)

At the outset we may state that this book does not contain a glossary of all the Indian terms and words used in different parts of India. The glossary pertains chiefly to two languages, namely, Urdu and Hindustani. In so far as it

goes, the book will be found to be a good guide for the beginner, the foreigner, especially, who has to acquire a knowledge of the languages spoken by the people with whom he comes in contact every day. The glossary relates to the religion, customs, government, land and other terms and words in common use. There is also added a glossary of terms used in District work in the N. W. Provinces and Oudh and also of those applied to labourers. We are told that the work has been compiled chiefly for those who have not sufficient time to devote to the study of the languages of the Hindu and Mussalman peoples of India. The Roman character is used for all the terms in the book and this is its chief merit as the publication can be consulted by those unacquainted with the languages. Europeans and natives from other parts of India who go up to the districts where Hindustani and Urdu are spoken will find this book of great help. We must not forget to add that the appendix at the end gives computation of time and money, and weights and measures in British India. To help the foreigner to address the natives of India properly, various forms of address are given.

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A SHORT HISTORY OF ANCIENT AND MODERN INDIA, by Ramesh Chunder Dutt, C.I.E., F.C.S. (Macmillan & Co., Price Re. 1-8as.)  
CIVILISATION IN ANCIENT AND MODERN INDIA, by Ramesh Chunder Dutt, (People's Edition. Published by the Elm Press, 29, Beadon Street, Calcutta Price Rs. 5.)

Mr. Dutt's short history of ancient and modern India comes in at a very opportune hour. It will be a good and healthy supplement to Sir William Lee Warner's "Citizen of India" which the Imperial Government by its mandate has now virtually forced on all unwilling teachers and managers. There is yet another need for Mr. Dutt's book. In almost all the histories of India hitherto written a good deal of space has been given to British rule, and the Hindu and Muhamadan periods have generally been disposed of in a few pages altogether inadequate for the narration of the events and their importance. Mr. Dutt has made a very happy departure and devoted a considerably larger proportion of space for the Hindu and Mussalman periods. The foreigner and the unfortunate Indian who are on a par in regard to their ignorance of Indian history will find Mr. Dutt's little volume of immense help, while the school and college student who has hitherto been labouring under the disadvantage of the want of a good text-book may safely trust to Mr. Dutt's short

history of ancient and modern India. We are glad to be confirmed in this view by the testimony of a distinguished European professor of history who has had much to do in the shaping of the history curriculum in the Madras University. The general reader and the student whose interest in Indian history may be roused by the perusal of Mr. Dutt's short history will find Mr. Dutt's history of ancient civilisation in India based on Sanskrit literature, a happy companion volume. We are glad that Mr. Dutt has permitted a Calcutta publisher to bring out a cheaper edition of his costly volumes on the civilisation of India.

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**HISTORY OF ENGLAND** by *P. York Powell*  
*M. A. and T. E. Tout M. A.—Longmans Green & Co., Price 7/6.*

We are told that this history has been planned and written with a special view to its use in schools. The work was originally written in three parts, each being complete in itself. The first part ends with the death of Henry VII; and for this Mr. York Powell, Regius Professor of modern history in the University of Oxford, is responsible. The second and third parts are from the pen of Mr. T. E. Tout, Professor of History at the Owens College, Victoria University. The satisfactory features of this history are, firstly, a connected relation of the main facts of the political and constitutional history in due chronological order; secondly, a sketch of the course and progress of the language, literature and social life of the English people, in a series of chapters at the end of the various periods. There is yet another good feature of this book which deserves notice. The history is not merely that of England and Wales but of the whole of the British Empire, and some space has been given to the history of Scotland and Ireland, the old and new Colonial empires, and India, thus attempting to make the history, a history of the British Empire. Even the ordinary reader will be particularly interested in reading the general sketch of the progress of each century given at the end of the different periods. It was a very happy idea to have added these chapters. The usefulness of the book is sure to be enhanced on this account. The style throughout is simple and the facts are set forth as clearly as possible. We have no doubt that in India the book will be largely sought for by students who take History as their optional subject for their B. A. degree examination. So much for the merits of this book. We are sorry to note that like several other histories of England, this book abounds in many inaccurate and, in some instances, positively absurd

statements regarding India. Indeed, we must confess that the chapter on British India is highly unsatisfactory. Speaking of Lord Ripon's rule the author says, "The miserable Vernacular Press was allowed a liberty that quickly became license." Later on we are told "Local Self-Government was widely extended, even to Country Districts, always to the disadvantage of local administration."

In another place we are told that "the outcry raised in the wretched Native Press against the measures taken to isolate the disease led to a salutary extension of the law against sedition." These are some of the choice *obiter dicta* which Professor Tout has sought to embody in his history. The exaggerated use of the adjective in the foregoing sentences is enough to show the temper of the writer. Barring the chapter on British India which abounds in many inaccuracies and statements apparently due to prejudice, this history of England is good in every other way and we trust that when this book runs through another edition, a serious effort will be made to have the portion on British India completely re-written.

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**KALI, THE MOTHER**—by *the Sister Nivedita of the order of Ramakrishna, Calcutta. (Published by Swan Sonnenschein & Co., London, 1900.)*

This remarkable little book from the pen of an English lady, nurtured in the traditions of Christian faith, bears an unmistakable testimony to the slow and silent influence which the East is exercising on the West in the domain of religious thought. Thanks to the labours of the Theosophical Society and the Ramakrishna Mission, Vedantic ideas have of late years spread far and wide in Europe and America and received a sympathetic treatment at the hands of not a few of their savants. What were once looked upon as crass superstition and meaningless dogma are now regarded as more or less adequate symbols of deep religious truths. This new spirit—full of promise for the harmonious development of religion in the future—has found an eloquent expression in the thoughts of sister Nivedita. Her interpretation of Kali as the divine mother, just, yet merciful, breathing the consuming fire, yet filled with the tender love of the mother that passeth knowledge, is indeed profound and will evoke a sympathetic thrill of joy in the hearts of the Hindus. The appreciations of Ramaprasad and Ramakrishna Paramahansa, two typical saints of Kali, reveal a masterly insight into the deep significance of their inner life and the abiding value of the ideals which they embody. Nothing we have read of Ramaprasad and Ramakrishna has stirred us so deeply as sister

Nivedita's brief sketch, and we heartily recommend it to all who entertain doubts as to the living and life-giving character of the Vedantic religion. Religion, as has been well said, is not thinking and theorizing, but being and becoming, and this truly genuine side of religion is best studied in the lives of Ramaprasad and Ramakrishna who flourished in the nineteenth century and left behind them an imperishable record of songs and sayings pregnant with wisdom, inspiration and practical guidance to the aspirants after truth. We offer our best thanks to the sister Nivedita for her very instructive and inspiring volume and hope she will continue this work of interpretation to the benefit alike of the East and of the West.

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EDWARD BARRY *by Louis Beck*  
(*T. Fisher Unwin.*)

The name of the book suggests very little that may be of interest. But the incidents are diversified and interesting enough and the characters portrayed are of different classes. The adventures of Barry, the hero, and his brig are so many illustrations of the manliness of a poor but honest young man. The narrative, as a whole is nothing, but here and there the book bristles with instructive sentiments beautifully expressed. Greater sentimental interest attaches, however, to the love affair of Edward Barry, the South Sea Pearler. He wishes to marry the daughter of one of the big 'bugs' of Sydney, but the mother of the girl is against the alliance. Barry goes off to sea. Meanwhile, owing to the distressed circumstances of her family, the girl is obliged to marry a Colonel Maclean. Barry is not, evidently, much grieved on account of that, for he had won the affections of a Mrs. Tracey. His approaching departure in the barque causes much anxiety and sorrow to Mrs. Tracey, and Barry "looked at her and saw that her eyes were filled with tears." "I don't want you to go," she whispered. Nothing further is related, but we can, however, suppose that he married her, from the fact that "Barry's answer to her whisper was "to slip his arm round his waist and draw her head upon his shoulder," and that when he stood up "her beautiful face, radiant with smiles, came in on Barry's arms." The story which is a delicate one might have very well been condensed.

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RUE WITH A DIFFERENCE, *by Rosa*  
*Nonchette Carey (Macmillan & Co.)*

Rosa Nonchette Carey is a prolific writer of fiction and the sale of over a quarter of a million copies

of her books show's her great popularity. At the present time when novels are written to teach us moral philosophy, or psychology, or to illustrate particular theological fads, or to lay bare the ugliness of modern life, — it is refreshing to find a novel which is purely a novel and a work of art. Her Valieree and Paury are quite human and thoroughly lovable which, by the way, cannot be said of most of our novel heroes and heroines. The story, though not absorbing, is highly interesting.

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THE ATTACHE AT PEKING, *by A. B. Freeman*  
*Mitford C. B. (Macmillan and Co.)*

These are a series of letters written by Mr. Mitford between the years 1865 and 1866 descriptive of China and the Chinese people when he was the secretary of the British Legation at Peking. Mr. Mitford was then almost a boy but with an acute eye for observation and a fine literary touch. The first letter opens with a description of Hô-kong and the generous and sumptuous hospitality of the merchant princes who made large fortunes by the opium trade. The descriptions of Peking with its dusty streets swarming with people, the lull stations and Buddhist temples, and the Beggar's Bridge are done with true art. The sketches of Prince Hung, the President of the Council and Prime Minister, Hungchi, the old dandy, and Tung, the fat old literary mandarin, are worth reams of description. Mr. Mitford shares the orthodox official opinion that there can be no good in the Chinese, especially of the Peking Chinese, that they are a treacherous race with a veneer of *bonhomie* surface good nature which conceals an invincible hatred of all foreigners.

The book gives us altogether a vivid description of the state of affairs in 1865-6, and the incidents of 1900 are seen in embryo even at that period. There is a long and able perface written recently which at the present moment is very valuable and highly instructive. Mr. Mitford's opinion is that the dread of foreigners is not due to missionary enterprise or commercial rivalry, or the opium trade, but to the dread of all reform in the official mandarin mind. His idea is that so long as the old state of things is continued, we may expect the horrors of 1900 repeated and plead for new settlement with a better atmosphere for the Government nearer to the sea and far away from Peking. It is for experts to judge whether he is right.

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## Books Received.

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 Eleanor by Mrs. Humphry Ward ... ..  
 Rue with a Difference by Rosa Non Chette Carey ... ..  
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 In the Palace of the King. A Love story of Old Madrid by F. Marion Crawford ... ..  
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## TECHNICAL EDUCATION FOR INDIA. An address delivered by R. Vedantachari .. ..

## SOME HINTS TO STUDENTS GOING TO ENGLAND TO STUDY by N. K. Aloni, B.A. (cantab.) Baroda...

## Topics from Periodicals.

## INDIAN FAMINE AND TAXATION.

Mr. J. H. Bridges contributes an article under the above title to the December number of the *Positivist Review*. In the writer's opinion, the time is fast approaching when the choice will have to be considered between abandoning India and making a large and constant call upon the British taxpayer for its retention. If these contingencies are to be avoided, some fundamental changes should soon be made in the Indian administration. Three points are mentioned on which attention should be concentrated.

1. Permanent settlement of the land revenue should be extended to the whole of India, as Canning proposed forty years ago; and thus the full advantages of his industry will be secured to the cultivator. 2. By the substitution on a larger scale than at present of native for British officials, the drain of home-charges should be diminished. At present, four millions sterling, a tenth part of the annual revenue, are devoted to non-effective services; to the maintenance of non-resident soldiers and civil servants released from work, not as in this country when old age is at hand, but in the full vigor of middle life. 3. Finally, the flagrant injustice of saddling India with the cost of our wars in Abyssinia, Egypt, the Soudan, Persia, Afghanistan, and China, shall not merely cease, but compensation should be made for sums already disbursed in this way.

By these and other means India may be saved from ruin and launched on a new career of health and prosperity.

The article does not admit of much condensation, being mainly a historical summary of famines and methods of famine-relief hitherto adopted in this country. We therefore extract the following portions as affording instructive reading

In the autumn of last year the rain failed in Bombay, the Punjab, Rajputana, the Central Provinces, and to some extent also in Madras. Relief works were opened, to which by the end of October half-a-million of applicants had resorted. This number had increased by the end of 1899 to three millions; by the end of March to nearly five millions; at Midsummer to nearly six. Nearly two millions still remained in October on these relief works. By far the largest number of applicants for relief came from the Bombay Presidency, and from the Central Provinces. But the famine, said Lord Curzon in a speech delivered a few weeks ago at Simla, "has affected a quarter of the entire population of India, and the estimated loss to crops is fifty millions sterling, in addition to the loss of some millions of cattle.....the scale of almshiving has been unprecedented, and is likely to embarrass future famine administrations." He added that the expenditure of the Indian Government on famine administration had amounted to seven millions sterling.

Famine, due to deficient rain-fall, is a disaster of perpetual recurrence in India. In 1770 ten millions are said to have perished from it in lower Bengal. In 1791. and

again in 1802, it attacked Madras, Bombay, and the dominions of the Nizam; in 1803, the North-West Provinces. Subsequent periods of famine were 1807, 1812-13, 1828-29, 1833, 1837-8, 1854, 1860-1, 1866-7, 1868-9, 1873-4, 1876-8. From this last, affecting a population of 58 millions, five millions are estimated to have died. It formed the subjects of wide and prolonged enquiry by a strong Commission, whose final report in 1880 laid down the principles by which the Government of India has since been guided in the famines of 1889, of 1892, of 1897, and in that which is now slowly coming to an end.

*In the early days of our experience of famine, the remedy in which most confidence was placed was prohibition of the export of grain.* Some efforts were made in Madras in 1792 to establish public works; but not much was done in this direction till a later period. In the Bombay famine of 1812, and in Madras in 1824, attempts to interfere with the natural process of the corn-trade were definitely abandoned. In the famine of North India in 1837, the principle was announced that Government should provide work for the able-bodied poor, leaving charitable agencies to deal with those who were incapable. In 1860-1, however, Government assumed both functions. Cooked food was given in poor houses to those who were willing to receive it, though unwillingness to leave their homes, intensified by the difficulties of caste, led large numbers to prefer death to relief of this kind. The terrible Orissa famine of 1866, came too suddenly to admit of any elaborate organisation of relief. In 1868, and again in 1873-4, "tests of pauperism" were to a great extent abandoned, and Government resorted to the doubtful policy of importing grain; but the apparatus for its distribution was wholly inadequate, and much of it never reached those for whom it was intended. The wiser policy of non-interference with the ordinary course of trade has since that time been systematically adopted. The wide-spread and severe famine of 1876-8 was made the occasion for a searching review of past modes of dealing with the subject, and for establishment of principles for future guidance. It was found that of the 109 years between 1770 and 1879 there had been 24 bad years to 85 good. It was decided that an annual sum of £1,500,000 should be set aside in the Indian Budget as a famine fund. As already stated, it was laid down that Government should meddle neither with the import nor the export of grain; but the vigorous measures should be taken for the extension of means of communication. On the outbreak of famine, public works should be forthwith opened. Such works were to be within easy reach of the homes of the applicants. Nothing should be done to relax the ties that bind man to man in the village community, and in this way to promote the growth of a vagrant population. The work offered was not to be entrusted to contractors; it should be of a useful kind, suitable for unskilled hands, such as stone-breaking, earthworks, &c.: the task expected of each labourer was to be about 75 per cent. of that done in ordinary times. The wages to be given should be such as would procure an allowance of food sufficient to maintain life and health, usually fixed at a pound and half grain daily for an adult male, the allowance for women and children being proportionately less. To each system of works a hospital was to be attached. So much for that portion of the distressed population who were capable of work. For the incapable destitute, the poor-house system, which in previous famines had broken down on trial, was to be restricted to mendicants and tramps. Out-door relief was to be given in each village; the head-

men being entrusted, under proper supervision, with the distribution of doles of grain.

Finally, the very important question of land revenue was not left untouched. The Commissioners explain that the settlement being usually made for long periods, upon an average between good and bad years, the revenue should be paid in bad and good years alike. This principle, however, they say, does not apply to years of extraordinary drought. "The true principle on which leniency should be shown is this: that nobody should be forced in such cases to borrow in order to pay the land revenue, but that all who can pay it without borrowing should do so."

They observe that when the proprietor has any surplus crop, the high prices prevailing in famine years will enable him to pay the revenue. Enquiry must be made whether there is a surplus or not. It must be seen to that whatever relief may be given to the landowner is passed on to his tenant. Relief must, in most cases, be suspension, not remission, of revenue. When interest is exacted for arrears it is not to exceed one anna per rupee, i.e., 6½ per cent.

Briefly, these are the lines on which for the last twenty-five years the Indian Government has been proceeding in times of famine. Regarded as a policy for the relief of distress, every one must admit that it is careful, considerate and humane. It is analogous in many respects to the policy adopted during the Lancashire cotton famine of 1864, when once the administrators of relief had shaken off the opprobriums and oppressive restraints of the English Poor Law. But there is a fundamental difference between the two cases which it is well to examine. When the American war ended, the cotton famine ceased, and Lancashire entered on an unbroken period of prosperity. But in India, hard upon the end of one famine, follows the beginning of another. Thickly scattered through 85 good years are the 24 years of distress. We search the pages of the Famine Commission for proposals to render the Indian population more capable of making such provision during years of plenty as shall enable them to tide over these recurring years of scarcity; but we search in vain. With the problem of lightening the burden of taxation, a problem inviting reduction of our enormous expenditure, civil and military, it was not theirs to deal.

#### AGRICULTURAL BANKS.

In an article in the January number of *The Imperial and Asiatic Quarterly Review*, Sir William Wedderburn draws attention to the previous discussion on the subject, and in a very opportune manner suggests that the Conference now sitting at Calcutta must be guided in the main by two important official despatches on the question, namely, (1) the despatch of May 31, 1884, from the Viceroy in Council to the Secretary of State for India, in which the establishment of a pioneer bank was proposed; and (2) the reports of Mr. Nicholson, of the Madras Civil Service, who in 1892 was placed on special duty for the purpose of inquiring into the possibility of introducing a system of agricultural or other land banks. The scheme of the Hon. Mr. Nicholson is very briefly told. He is fully aware that no general scheme

is possible for the whole of India. If the proposal is to be worked at all, practical experiments must be made in different provinces, and legislation must be directed to fostering and developing the special methods found locally available. To those who labour under the delusion that Government must find an all-embracing scheme by which land and agricultural banks must be made to spring up throughout the land, Mr. Nicholson's answer is straight. He declares that no such thing is possible; that no such thing has ever succeeded in Europe or elsewhere, and that though from the time of Frederick the Great, hundreds of cut-and-dry schemes have been proposed, not one of them have been found to be workable. The best way, according to the Hon. Mr. Nicholson, to establish agricultural and land banks, is for people to create local "Nidhs" and "Funds" and for the Government to give all the help it can to further their interests. The initiative must come from the people themselves, and the Government must give a sympathetic and effective support to them. The Hon. Mr. Nicholson's chief hope lies in the work of reformers and enthusiasts among the Indians themselves, men of the type of Ruffeisen in Germany and Luzzatti in Italy, "who believe in banks, and in the reform of rural credit, who seriously interested in the economic and moral advancement of the ryots, who dwell amongst them and are of the people, and yet by their intelligence, prescience and energy, are above the people." And he concludes by saying that the whole of his report might be summed up in the two words: "Find Ruffeisen!" The practical recommendations of Mr. Nicholson amount, therefore, to this: In each province find pioneers for the work among Indians of experience and public spirit; get them to establish experimental banks suited to the local needs of the cultivators, and give to these pioneer enterprises all reasonable State support, whether legislative, administrative or financial. So much for the efforts made by Mr. Nicholson for the establishment of agricultural banks, and we must not concern ourselves now with the reasons that led to the rejection of his proposals by the local Government. We may refer, however, to a similar effort made in the Bombay Presidency. About the year 1875 the condition of the Deccan ryots became very deplorable. He had become deeply indebted, and had thrown himself absolutely at the mercy of the sowcars. The condition of the Deccan ryot appealed alike to the people and the officials, and, accordingly, in Poona, a centre of grand intellectual activity, a movement was initiated to improve the then disastrous condition of the Deccan ryot.

After careful inquiries a committee of leading non-official gentlemen formulated a scheme for the establishment of an agricultural bank. The ryot seemed to have welcomed the proposal; the co-operation of the village money-lenders was assured. The then Collector of Poona presided at the public meeting called to discuss the question, and after considerable deliberation, resolutions were unanimously passed for the establishment of an agricultural bank. Sir James Fergusson, the then Governor of Bombay, supported the scheme. The scheme also received the immediate and sympathetic attention of Lord Ripon, the then Viceroy, and Sir Evelyn Baring (afterwards Lord Cromer) who was then Finance Minister to the Government of India. An important despatch was sent by the Government of India to the Bombay Government, expressing sympathy with, and approval of, the proposals in the main subject to certain conditions. The Government of India was willing to appoint a Commission for the liquidation of the Deccan Ryots' Debts, and were willing to advance in the first instance cash to the extent of 61 lakhs necessary for the composition of the debts. As regards the bank, they were willing to remit a part of the stamp duty in documents and court-fees in suits, and they would concede to the bank the privilege of recovering its advance through the revenue officers as arrears of revenue. But, while granting these concessions, the Government of India were careful to explain that similar privileges would not necessarily be granted to other similar banks. The Poona bank was, in fact, treated as a pioneer enterprise, the object being to make a practical experiment in a limited area, with the hope that if the system was successful it would, with the necessary modifications, spread wherever needed, and, to use the words of the despatch, "prove of incalculable benefit to the whole country." In conclusion, the Government of India stated that they attached very great importance to the experiment, and asked the Bombay Government to undertake the working of the measure. In reply the Bombay Government stated their willingness to give the scheme a trial. In this way, after no little labour and negotiation, every interest and every authority in India had been brought into substantial agreement as to the merit of the scheme. And the memorable despatch of May 31, 1884, signed by the Viceroy and his colleagues, was forwarded to England, setting forth fully the circumstances of the case, and asking the sanction of the Secretary of State to the proposed experiment. "We are anxious," they said, "to give effect to a scheme

which we believe to be advocated on purely disinterested grounds, which can, under the experimental conditions proposed, be carefully watched, and which is likely, if successful, to be productive of much benefit to the country." Here we have to pause and state in one word that the whole thing had to fall through owing to the action of the Secretary of State for India. And so the benevolent efforts of Mr. Nicholson in Madras and of Sir William Wedderburn and the Government of Bombay and the Imperial Government have not been able to accomplish their object. It is to be hoped that in the committee which is now sitting at Calcutta, Mr. Nicholson will persevere with his wonted industry and sympathy with the Indian ryot, and, with the help of his colleagues from the other Presidencies, see that something practical is done.

#### THE ADVAITA TEACHING OF THE VEDANTA.

Last month we gave a summary of Dr. Cooper's objections to the teaching of Advaitism. Mr. H. V. Nanjundaiya, M.A., meets in the *December* number of the *Christian College Magazine* the objections.

The Vedanta, according to Dr. Cooper, teaches the identity of the individual soul with Brahma. In postulating an identity we imply that both are equally valid ways of apprehending the same thing in different aspects of thought. In the Vedantic doctrine there is no such identity made out about the relation between Brahma and the soul. It asserts that the individual soul has not the same reality as Brahma, the only highest reality. One only without a second.

As to the objection that the facts of experience are against the oneness of the individual and the universal soul, it is no objection as all "our experience being derived from the sphere of *Maya* cannot be applied to Brahma which is in the region of reality."

*Maya* is better translated as phenomenal apprehension than as illusion. The existence of a phenomenal world no more shows that Brahma is a liar than the existence of pain proves that he is a tyrant or the inequality of fortune, that he is impotent.

In raising the question whether the lower animals, plants, and inanimate objects are Brahma, Dr. Cooper ignores the fact that the Vedantin is concerned more with what Brahma is than with what these objects are; and so far from saying that Ramaswami is Brahma, he would say that Ramaswami (as we understand him) is not Brahma. In regard to the next 'difficulty' also Dr. Cooper similarly misses the mark. If four players are engaged in a game of whist, they are moving in the phenomenal world, subject to its limitations. Why should it

follow that for the sake of over-reaching their fellows and spoiling the zest of the game, they should be suddenly transported to a higher sphere and be endowed with an intuitive knowledge of the other's hands? If they were so carried away, the cards and the players would all melt into nothingness (as mere phenomena) and the players would probably care nothing for whist or separate consciousness. Indeed, Dr. Cooper himself seems to admit the inapplicability of the objection when he remarks that "this, we may suppose, is part of the illusion."

The next difficulty stated is the inconsistency of making Brahma both *nirguna* and *saguna*. When Brahma is supposed to be the only existent being, it is not accurate to apply 'before' and 'after' to him. That he is *saguna* can be said of him only in a phenomenal sense. As absolute being, he is always, unchanged and unchangeable. This is explicitly stated to be the doctrine of Sankaracharya.

As to the teaching being unworthy of God and degrading objection does not deserve serious notice. Truth has to be faced and man need not expect the world to be fashioned to suit his tastes. What is there degrading in the Vedantic teaching? The Bible says God made man in his own image. The Advaitin looks from the other end and says that this divine image is the universal spirit pervading the world.

#### SAVAGES AND CRIMINALS

Forms the subject of an interesting article in the last number of the *Humanitarian*. The writer, Professor Ferrers, supposes that crime is "the atavistic resurrection of a condition of things that is the normal one during the first barbaric periods of the history of mankind."

Among those who have been guilty of the most serious offences, certain moral characteristics are met with, that seem to be peculiar to the psychology of the savage and barbarian, and render him a being in whom atavism reproduces certain characteristics, which evolution has by now caused to disappear, of the mind of civilized man. These atavistic characteristics of the criminal are, in my opinion, *incapacity for work* and *impulsiveness*.

In support of this the writer quotes from various authors passages fully proving the truth of the Professor's contention. Then he proceeds to remark:

Now these same characteristics are met with among criminals who have been guilty of serious offences, especially among those whom Lombroso has called *born criminals*. The latter are principally lazy and impulsive, like savages. Lombroso has studied a great number of murderers and thieves whose perversity was such as to point to their having been born criminals, and has found that the majority were eccentric men of an extraordinary irritability which a little sufficed to change into impulsive actions; that they were men of the most capricious temper, irritated against themselves and others, by turns gay and depressed without any reason, and ready to pass without any cause from one state to another. Many of them—especially thieves—confessed that the idea of theft almost always occurred to them unexpectedly, at the

sight of some article, and so forcibly that they almost felt obliged to put their thoughts into immediate execution. Esquirol, the celebrated French psychiatrist, had noticed in many murderers as far back as the beginning of the century "a taciturn, melancholy, variable and impetuous character." Vidocq, the celebrated chief of the French police, observed an extraordinary levity in thieves which leads them to say all they think, and they can often not refrain from revealing the crimes they have committed or the plans they are meditating.

At the same time, impulsiveness in criminals is accompanied by laziness, which is perhaps their chief characteristic. In some recent statistics made in Germany, Siebent found that among 3,181 prisoners almost half the number—viz., 1,347—had a horror of work, and 962 of these were thieves. This confirms Vidocq's words: "The thieves are incapable of anything which calls for energy or assiduity; they cannot do anything except steal."

What is atavistic is not so much the tendency to commit or other as inability for methodical work added to impulsiveness. The mind of the criminal has not properly developed through some deficiency, original or acquired. It is, therefore, incapable of acquiring that self-control and taste for methodical work characteristic of the civilized man. Hence the importance of training in the Reformatories criminal youths to regular habits of work. Great are the saving virtues of work, of methodical work.

The habit of methodical work which disciplines all the violent passions of man may easily be acquired by men who are normal or even a little degenerate, if education is begun early; above all, if the youth has the example of work constantly before his eyes. It is difficult, on the other hand, when, an account of unfortunate circumstances, the youth grows up in idleness, because the farther advanced a man is in years, the harder it becomes to train him to work. This is, therefore, the principal form of social influence on crime, because our state of society has unfortunately not yet succeeded in providing every one, as it ought, with an efficacious training to work; it abandons many young men to idleness, thus reducing them artificially to the state of savages and barbarians, exposing them to the risk of becoming criminals in one way or another. This proves how good an idea it was which directed the organization of the State Reformatory at Elmira, where the young criminals are carefully trained to work; to transform the semi-barbarians, idle and impulsive, into self-controlled, hard-working men, with definite moral ideas. And it proves how mistaken and absurd a system that of cellular confinement is which is prevalent in Europe, by means of which criminals whose worst moral defect is laziness are supposed to be reformed by condemning them to inactivity for years within a narrow cell, and to the compulsory torpor of long days passed in a small room, either thinking of nothing at all, or thinking of new crimes to be committed as soon as their term of imprisonment shall have expired.

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#### THE NATIONAL MOVEMENT IN MODERN EUROPE.

Professor K. Sundara Raman whose name is familiar to all magazine-readers in South India, contributes a thoughtful paper on the subject to the

November number of the *Madras Review*. The professor begins by pointing out the difference in the social form of life between the Ancient and the Mediaeval civilization. "Kinship is the basis of of the ancient and religious faith the basis of modern, society." Not so the idea of modern European society, the essential bond of union in which is the feeling of common interests and rights of a group of men. This principle, the professor contends, is the direct result of the decadence of religious faith and of the old ideal of duty for duty's sake which, again, was the product of religious inspiration. This sentiment of nationality is distinct from the principle of the Sovereignty of the People i.e., the principle of popular control in the management of local and central Government and the principle of personal liberty which gives men "perfect freedom of action to settle their own status in social and economic life." We see the spirit of nationality working only "when the feeling of common race actuates a community, not only in rendering obedience to the laws and Government of a state, but in practising the utmost vigilance of exertion and self-denial, even to the extent of shedding its life-blood in times of crisis and danger." The professor then proceeds to review, in a concise manner, the conditions and influences under which the sentiment of nationality has been brought into existence and developed in modern Europe and argues that in France, in Spain, in Germany, in Italy, in Greece, and in Hungary, the stifling influence of foreign interference has inspired national awakening. It is further pointed out that the history of every national movement in Europe in which the spirit of nationality has worked with benefit, teaches five lessons: 1. Acquisition and growth of national wealth which is indispensable to the maintenance of the spirit of patriotic fervor. 2. The creation or improvement of a vernacular language and literature which has been one of the chiefest devices of national leaders to gain the support of their countrymen in their struggle for liberty. The disappearance of the people has always more or less synchronised with that of their language and literature. 3. Renovation of the martial spirit of the people and the effective introduction of military reforms? "An unwarlike people have nowhere been a great power for good or evil among human societies. . . . Given the virtue of heroic courage in war and the genius for military organisation, we have one of the most essential requisites for making a living nation." 4. The benefit of foreign help: no national state has been founded without a struggle; the military and financial resources of subject populations and states are so inadequate that they can easily be over-



thrown by the superior forces of the supreme power, and in such cases "we find that subject-states and people have had recourse to foreign help and have undergone sacrifices in order to secure such help." 5. Leaders are wanted who can accomplish all these works, who can maintain the efficiency of the organised nation-state, to secure for their community a place of honor and importance among the powers of the world. What is required of him who would shine as such will be best given in the professor's own words :—

If it is not possible for us to ascertain by what experimental processes we can produce great leaders of men whenever we would like to have them, we can at least observe and analyse the characteristics of the men to whom it has been given to do great things for humanity by way of illuminating their minds, inspiring their consciences or enriching them with an ample endowment of the means and materials which are needed for the enjoyment of peace and plenty on earth. These characteristics may be summed up in two words, culture and character. What is culture? Various definitions have been given, but it will be well, instead of indulging in vague generalities, to seek out the visible marks by which we can distinguish the man of real culture from him who has none or is merely a simulacrum. To be able to understand one's epoch, to believe in progress and to be always ready manfully to bear one's part in active life—that is real culture. And, then, as to character, it may be summed up as consisting in independence of all sinister influences, and in honest, unwavering enthusiasm for all that makes for progress in freedom and peace.

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#### FRIEDRICH NIETZSCHE: THINKER OR RHAPSODIST?

Henri Lightenberger writes an appreciative notice\* of the German writer who died recently after eleven years' confinement in a Mad-house. Opinions are divided about the merits of Nietzsche. Some there are who regard him as the most powerful thinker that Germany has produced after Schopenhauer, as the apostle of a new religion, as a superior genius who had a profound knowledge of the human heart, a strenuous advocate of the cult of force. To others he appeared as the author of incoherent and mad fantasies, as the most dangerous representative of modern decadence, of intellectual and moral anarchism, which, as a virus, eats into and dissolves the social organism. As it is too early for any definitive judgment on the value of Nietzsche's work, the writer attempts to bring out certain tendencies of his teaching and to show what there is in his ideas or personality to charm or to provoke his readers.

To take him on the negative side of his teaching, Nietzsche pushes to the logical extreme the sceptic and pessimistic tendencies of the time. All philosophers from Plato to Kant have been telling us

that we can have only a phenomenal knowledge of the external reality, that we can never know it as it is in itself independent of the forms of sensibility and of reason. Nietzsche goes further. He is opposed to the positing of a real world as different from the world of appearance, of the thing *per se* as different from phenomena. We are incapable, according to him, of affirming, even of conceiving, that there exists something outside the world of perceptions, outside the world of representations. The "thing in itself" appears to him to be a feeble and metaphysical echo of the notion of a living God, and there is as little reality in the copy as in the original. Two supreme convictions remained for our century, faith in the absolute value of duty and faith in the absolute value of truth and intellectual sincerity. Now, Nietzsche calls in question these two supreme values of our "table of values." For life to develop and prosper, for the man-plant to throw forth beautiful and vigorous shoots, evil is as necessary as good, lie as necessary as truth. The passions classed generally as evil, cruelty, hatred, despotic violence are as necessary for the development of humanity and produce as fine things as the most renowned virtues, goodness, pity, humility. Lies and errors are equally beneficent, and the philosopher who aims to destroy illusions, aims at the annihilation of life. Thus it would appear Nietzsche is a thorough-going nihilist. He destroys all the beliefs which have up to now sustained and consoled humanity. He denies the existence of God, a Beyond, the Good, the True, the Ideal. He is a pessimist who sees the whole world travelling and groaning. No happiness at all for man. History is only a brutal and odious nonsense, civilisation a hideous tyranny which causes the prosperity and well-being of a feeble few at the expenses of the misery and oppression of a multitude of the disinherited.

What then is the conclusion of Nietzsche? Is Nirvana the goal of humanity? Is the will to live to be annihilated? Is all creation and life a huge mistake.

The error in estimating the worth of man and man's life rises from our adopting a scale valuation outside of man himself. He is judged according as he consecrates himself to the service of God, as he realises in himself the good and the true. An ideal is put forward and life is pronounced a failure because the ideal is not realised. Life, says Nietzsche, has no need of justification. The diseased and the degenerate and disinherited naturally seek death. Nothing more legitimate, nothing better. If they want to die, let them die, give them a push forward, if need be, to the tomb. As to the

\* Revue Franco-Allmande; Munich—Paris, Oct., 1900.

men of healthy and robust minds and bodies, let them live, let them seek the richest and the most intense life. They are a law unto themselves, they are the creators of values. The world as a world is a formless mass, a senseless chaos. It is man that gives it significance. The supreme value by which we estimate the price of life are not outside of us. This is the teaching of the prose poem *Zarathustra*. In the over-man is symbolised the man emancipated from the ancient, table of values, the man who recognises himself as the creator of values for whom the supreme law is self-realisation. God may be no more, but the over-man is a reality, and man can find in himself sufficient living force and strength of will to give himself a sense of life. If life is an evil the supreme duty is not renunciation and a cowardly escape from it. Man is a courageous animal and to suffer his strength is equal. He accepts his role as a player of the game with Chance and braves losses or gains the stake of life.

Another idea of Nietzsche is that of an Eternal Return. The world is perhaps an endless circle. I have perhaps lived a thousand times and shall perhaps live a thousand more. What a frightful prospect to those who hate their simple life here! How inebriating the thought to the *overman* who enjoys the infinite splendour of a life of eternal youth and fruitfulness!

The pity of it was the teacher of the cult of force or energy was far from being anyway like the overman whom he described. If Nietzsche had been a strong and triumphant overman of insolent health and of intellectual and physical vigour we might instinctively revolt from such teaching. Only a man who has suffered as Nietzsche has suffered has the right; perhaps, of preaching such a doctrine without being accused of insensibility and hardness of heart.

#### THE PEKING LEGATIONS.

The December number of the *Cosmopolitan* contains a graphic and clear-cut account of the Besieged Peking Legations, which gives a bird's-eye view of the unprecedented occurrences at Peking in summer, last year. The contribution which is from the pen of Sir Robert Hart was also sent for publication in the *Portnightly*, London. Detailing the circumstances that led to the attempt on the part of the Boxers to strengthen China, to frighten foreigners out of the country, to free the place from the influence of a foreign cult, the writer argues that the Boxer movement was the product of official inspiration, the outcome of either foreign advice or the study of foreign methods; it was patriotic in origin and justifiable in much that it aimed at. The

lawless and anti-foreign acts of the Chinese movement are not meaningless. Foreign Missionaries have been murdered; christian communities have been massacred; the property of the Natives destroyed; foreign legations, sacred in the eyes of law, humiliated; foreign buildings and their contents, legations, private establishments, churches, *et cetera* have been wantonly destroyed by fire. In the first place reparation must be made and compensation obtained for all these and their recurrence prevented. The next question to be settled by the treaty powers is how to make peace—China is evidently at war with all—and what conditions to impose to safeguard the future. There is a choice between three courses: (1) Partition; (2) change of dynasty; (3) patching up the Manchoo rule. The first course can never be expected to be a final settlement, with such an enormous population; there will be unrest and unhappiness, and the aspiration of the Chinese will run through all succeeding generations and assert itself when the time comes. As to setting up a new dynasty, "there is no man of mark whom all China would accept; and for a dynasty to be established by a concert of foreign powers would be an ear-mark of weakness and disgrace for ever and after. As to the third plan, the recognition of the present dynasty would be the easiest solution for all the powers. But "the possible flight of the court may, however, introduce a new element and require yet another arrangement." At all events it must be borne in mind that the present episode is the key-note of the future history of the Far East. The Chinese feeling "China for the Chinese and out with the foreigners," and the contempt of China for foreign institutions have been national, and in dealing with national facts national feelings must be recognised. In the case of China, treaty intercourse has rather deepened the aforesaid feelings and the future will not be uninfluenced by them. And what about the foreigners and the future that is referred to?

The old proverb says that "too many cooks spoil the broth"; let us hope that the settlement of this momentous international question will not suffer from the number of Powers that must have a say in it or from the number of considerations negotiators must face.

What has happened has been the logical effect of previous doings. Europe has not been ungenerous in her treatment of China, but, even so, has wounded her; a more tactful, reasonable and consistent course might possibly have produced better results, but in no case could foreigners expect to maintain forever their extra-territorialized status and the various commercial stipulations China had conceded to force. As to the future, it must be confessed that the Chinese so far have not shone as soldiers; but there are brave men among them and their number will increase. If the China of to-day did not hesitate on the 19th of June to throw down the glove

to a dozen treaty powers, is the China of a hundred years hence less likely to do so?

Of course, common sense may keep China from initiating an aggressive policy and from going to extremes; but foreign dictation must some day cease and foreigners some day go, and the episode now called attention to is to-day's hint to the future.

#### THE DANGER TENDENCY IN BRAIN STUDY.

The largest-souled of men complained that he was tainted by professionalism, that his soul was subdued to what it worked in. Psychologists by profession are not proof against such a taint. Mr. A. C. Brown warns them against the danger and shows how they might keep themselves from being thoroughly dehumanized.

The first obvious danger that brain study exposes one to, is the tendency to materialism and irreligion. But religion is so much a matter of temperament that we may dismiss this danger as of no great importance. "The real danger to the enthusiastic student of psychology is a constantly increasing and absorbing *inner* life in distinction from the practical outer life."

The distinction between the practical man and the self-anatomist is a commonly understood one. They two are apt to misunderstand one another. "The business man is apt to regard the thinker as an idle useless dreamer, while the thinker cordially returns this flattery by mentally placing the business man as a hustling Philistine."

The psychologist from instinct, choice and habit tends always to the world of introspection and analysis in distinction from the world of action. Nowadays, in every well-equipped psychological laboratory, the experimenter has many curious instruments at his disposal. With these he can measure the rapidity of thought the intensity of emotion, or a nerve vibration, as a sensory image is being flashed upon the cerebrum. Or his experiments may lead him into the subtler mental phenomena of telepathy, hypnotism, and clairvoyance, which are recognized by leading scientists as genuine, though yet unsatisfactorily explained facts. While the charm of the study, like the effect of a stimulating but insidious drug whose reaction is apt to be depressing, grows constantly by these experiments, it tends to draw the student more and more away from a healthy, practical *outer* life into an intense *inner* life. As he tries to analyze, day by day, "the stream of consciousness," the peculiar sequence of thoughts called reasoning, the psychology of the smile or the tear, and these analyses yield no positive results, he learns to discredit himself as a thinker, and unconsciously, from very habit, to measure and label himself as an emotional being.

This same habit of introspective analysis is equally destructive of the development of the emotional side of man's nature. The psychologic habit may result in a certain process of dehumanization.

As the lawyer carries his legal, the theologian the theological and the scientist the scientific bend

of mind in everything, the psychologist comes to regard his fellows, quite naturally, as a subject for introspective study and dissection.

Where the casual observer notes the spirituality intelligence, or grossness of the expression, the psychologist resolves this general expression into its physical elements and tries to trace, as far as possible, these physical elements to their metaphysical sources. The lines of the face, the pose of the head, the turn of the neck, the steady or shifting gaze, the lift or droop of the eyelid, the peculiar gesture, the slow or ready play of facial muscles—seeming trifles in themselves—are all, to the supercritical psychologist, outward and rarely mistaken symbols of habitual, mental, emotional and sensational processes. Thus he uses the outer, visible man as a sort of index to discover the inner, invisible man—the real man himself.

But these peculiar processes of scientific investigation are, to a great extent, processes of separation from his fellow-beings, who are thus studied, analyzed, criticized, approved, or found wanting as if the subject of such analysis were a totally different species of being. And so human nature, in retaliation, as it were for this practical desertion of his kind, loves to take revenge upon the man—to make of him a morbid *Hamlet* or a sad *Amiel* while like the mythical Kronus, who devoured his own offspring, he is compelled, by unrelenting habit to analyze his very morbidness and sadness.

To counteract this tendency to morbid introspection, there must be cultivation of some pursuit which will take the man out of himself, travel, active part in business and the like.

Thus it is, perhaps, that Dr. Weir Mitchell has become well-known in literature; that Dr. Hammond plied the literary pen; that Dr. Royce, of Harvard has written novels; that President Schurman of Cornell has temporarily laid aside his metaphysical studies for an active public life; that Dr. Virchow turns from cellular pathology to those ultra-liberal speeches which keep Germany rampant; that Professor Lombroso has varied his study of criminals and the dissection of criminals' brains by his experiences as an army surgeon. Those who hold prominent chairs in Psychology, as Professors Cattell, Titchener, Ladd, and James have the objective interests of the teacher and the pleasant social life and the healthful atmosphere of a large university.

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## DEPARTMENTAL REVIEWS &amp; NOTES.

## Educational.

By a Headmaster.

## THE BENGAL TEXT-BOOK COMMITTEE.

With the sanction of the Government of India, the Bengal Government has framed a constitution for the Text-Book Committee of Bengal. The essential features of the constitution may be summarised thus: Two-thirds of its members will be officials. All its members, official, and non-official, will be nominated by the Director of Public Instruction. This officer will be President of the Committee. It will ordinarily have no concern with the text-books in use in European Schools. It will only examine the books submitted to it by the Director of Public Instruction and advise the Local Government as to which of these books may be approved or prescribed. The actual approval or prescription shall rest with the Government. No school will be allowed to use any text-book not included in the lists of approved text-books published in January of each year. All intended text-books must first pass through a sifting process conducted under the orders of the Director of Public Instruction, before they can come before the Committee. If books be disapproved in the preliminary sifting, the publishers or authors may never know why or by whom they were rejected.

It will be readily gathered from the above summary that the Text-Book Committee cannot be expected to represent independent opinion. Presided over by the Director and consisting entirely of his nominees two-thirds of these being officials as well, the Committee will have its work both previously regulated and subsequently examined by the Director. Not improperly, therefore, does the *Indian Nation* call it the Director's Committee. Further the restriction of its jurisdiction to native schools cannot but create the impression that the chief motive of Government has been a desire not to effect a wholesome reform, but to fetter the discretion and abolish the freedom of native managers and native educational bodies. In this vital matter therefore, variety is to yield place to sameness and the free play of choice to the stifling pressure of rule.

One other remark of a general nature may be made here. Even the small scope assigned to non-official opinion is liable to be further narrowed by unwise selection of its representatives. The guiding principle ought

to be the inclusion not so much of those non-officials who are best known to the Departmental authorities or who have big names but not much connection with education, but of those who have intimate acquaintance with school-work and are likely to take part in, or immediately control, the teaching of the text-books. It would be too much to assert that this principle has been always followed in this part of the country in the constitution of Text-Book Committees or Departmental Conferences.

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MAHOMEDAN EXCLUSIVENESS.

The Presidential address of Mr. Syed Hussain Belgrami at the recent Mahomedan Educational Conference is in some ways a remarkable utterance. True, it is not without a sly, disingenuous reference to the Indian National Congress, recalling the famous *Coolin's your friend, not Short*. But there is one passage where the President protests against the sectarian character of the proposed University which is both wise and dignified, and which only wants to be a little more positive to be used as a motto by supporters of the movement:

"Some of our European friends who are in sympathy with the movement and do not look upon our aspirations with disfavour are yet doubtful of the wisdom of founding a sectarian University. They agree that a sectarian University that admitted none but Mussalmans to its precincts would tend to perpetuate old-world prejudices and develop narrowness of view. To a certain extent, I admit the justness of their criticism. That the founder of the College was animated by similar ideas is evinced by the fact that he left its doors open to Hindus as well as Mahomedans. I have myself been brought up in a school of which wide toleration and a courteous attitude towards other religions were the first principles. I have always held that all the different nationalities of India being sons of the same soil and subjects of the same great powers, should live together in harmony and peace like brethren. I can, therefore, see no insuperable difficulty in leaving the doors of our University open to all comers. I am even of opinion that it will in some respects be advantageous to our own youths to work side by side with their Hindu brethren and have always before them the example of their industry and their power of application. There is this to be said, however, on the other side of the question that the whole gist of our scheme hinges on residence, in which our Hindu brethren cannot unfortunately follow us, and experience has taught us that non-resident students are at all times a disturbing element in residential schools. Barring this one drawback, I see no valid reason why the University shall be exclusive and should this be found to be the only barrier to our success, I have no doubt the leader of the movement will accede the point and agree to throw the doors of the University open to all-comers."

\* \* \*

MADRAS MATRICULATION SCIENCE.

Dr. W. H. Wilson of the Presidency College begins a series of articles on the vexed topic of 'Science at the Matriculation Examination' in the *Educational Review*

for December. The first article is almost entirely critical, and, with the directness characteristic of the doctor, asserts that science masters in our High Schools do not show their pupils the experiments described in the text-books used. Whether the evidence furnished by him will sustain the inference he draws therefrom is more than the present writer can say. In point of fact, there are perhaps few schools at the present day in which simple experiments such as the one referred to are not performed. At the same time one must admit that the scientific spirit is so far from being assimilated even by masters, that possibly many of them have failed to draw the attention of the pupils to the appearance of the solutions they were experimenting with. And surely Dr. Wilson goes too far when he says that even if their attention had not been specially drawn to it, the students could not fail to observe it. This is giving too great credit to our pupils and too little to the masters. Unless there is something striking in the appearance of a thing such as would challenge the attention of the most unobservant, it would be going too far to blame an Indian lad for not observing and registering it in his mind without being told to do so.

#### VERNACULAR LITERATURE.

The *Review* had a few remarks in its last number on the subject of Vernaculars. Reference was made therein to the futility of expecting much useful work from the old-fashioned Pundit. In an excellent sketch of Bengali Literature during the last fifty years appearing in the *Kayastha Samachar* for November, the same line of argument is adopted and supported by the evidence of the facts of recent Bengali Literature. The whole article is worth reproduction, but a few points alone can here be mentioned. "In this latter half-century, the Bengali literature has advanced by leaps and bounds, and why? Because the greatest literary figures are men who have had the benefit of the highest English education and have been deeply imbued with the progressive spirit of modern times."

#### SANSKRIT STILL INDISPENSABLE.

One of the evils which are the foul offspring of the anti-Brahman feeling that is being diligently fostered by certain misguided folk, is the tendency, now too visible among some Tamil scholars, to feel ashamed of the dominant influence of Sanskrit over the Vernaculars in their best days, and to try to set up in the future a standard of bellicose self-sufficiency. Against this impossible enterprise, the work of the Dravida Bhasha Sangham so far affords a sufficient protest; and the

following quotation from the article referred to above enforces the same lesson from the experience of Bengali.

"I know Ishwara Chandra has been blamed for drawing too freely upon Sanskrit, and many estimable persons deprecate what they call a "Sanskritised Bengali style." But, with deference, these good people forget that Bengali is a dialectal variety of Prakrit, and therefore to us Sanskrit is, in a sense, the well of Bengali undefiled. As our knowledge increases, as our ideas advance, language has also got to grow, and if we have to borrow, as we sometimes must, will an addition to its vocabulary from English or Latin be more germane to the language than one from Sanskrit? There is no call upon the ambitious writer to revive the forms and inflections that have died out, but what language is so well adapted as Sanskrit to the coining of new words from known roots? And even if it be conceded that Vidyasagara's style is occasionally a bit too stiff, you do not surely desire our authors to descend to the level of green-grocer and the house-maid. Now what do you say to Bankim Chandra's style? Is it not pure Bengali, the best Bengali prose that has yet been written? But test it by a philological examination and, I dare say, you will find that Vidyasagara's style is not so much more 'Sanskritised' as you are pleased to suppose."

#### AN EXHORTATION TO EDUCATED MEN.

"Why do not our friends here bestir themselves? When will they realise that a nation without a literature is in a poor way? Original works cannot, of course, be produced to order. But literary endeavour has everywhere begun with translations, adaptations and imitations. We have educated men in Hindustan too, but very few of them seem to be awake to the imperative call of their country upon them. In Bengal the men of light and leading combined together to cultivate their mother-tongue. Have the men of light and leading in Hindustan yet done that? There is no want of materials from which you may draw. You will appeal most strongly to the popular sympathies if you draw upon the precious stores preserved in Sanskrit—the ancient mythology, the ancient thought and art of India. You will contribute to the advancement of the popular intelligence by rendering into the vernacular the knowledge and ideas of the West and thereby facilitating their assimilation. The best poets and playwrights in Bengal have written of Rama and Prahlad, of Sita and Savitri; it is of the lofty ideal of life and conduct which we are accustomed to associate with these classic names that they have treated, and no wonder they have struck a deep chord in the popular heart and their works have gone to form a national literature in the true sense of the word. It is not that we have not men of ambition and men of ability in Hindustan. But those who have turned their hands to the making of books have generally been unfortunate in the choice of their subjects as also of the instrument of literary expression.

In these days of Jingoism it is hard to realise that the pen is mightier than the sword. Yet as one of your compatriots I call upon you, brothers, to lay aside all petty inter-racial jealousies and, following the example of Bengal, to advance your country's true cause by giving her a worthy national literature. Step boldly in the wake of the torch-bearers in Bengal and speak out the message of your heart in the language of your heart, the tongue which your mother and sister, your wife and brother speak. And God speed you!"

**Legal.***By A High Court Vakil.*

## APPEALS AGAINST ACQUITTALS.

The Madras High Court very often interferes with acquittals by the subordinate courts. In the continental systems of law and in the English Criminal Law, we believe, there is no provision by which an appeal on facts is allowed against the judgment of a lower court finding the accused not guilty. We do not think that the framers of the Indian Criminal Procedure Code intended that the Government should have the right of impeaching the finding of not guilty by a competent court on the ground that another tribunal may come to a different conclusion on facts from that arrived at by the former. We have no doubt that cases may happen in which, in the interests of the public peace and for very exceptional reasons, the appellate court may be asked to interfere with the acquittal of a prisoner. But the idea in Madras seems to be that the Government has as good a right to appeal against the acquittal of a prisoner as a prisoner has of appealing against his conviction. This notion is subversive of all principles of Criminal Jurisprudence, and we hope that the matter may be taken before the Privy Council to enable their Lordships to point out to the Indian judges the true intent and principle of the right of appeal provided in the Code against acquittals.

## ENHANCEMENT OF SENTENCES.

The subject of enhancing sentences is another novelty of the Indian Procedure which finds no place in the laws of civilised nations. Very often, the High Court on revision passes a more severe sentence on a criminal than was passed by the lower court. Instances have occurred in which the High Court have directed a criminal to be hanged who had been sentenced to transportation for life. In Europe such an exercise of revisional jurisdiction would have created alarm and panic—but in Madras the matter is regarded as of no particular import. Probably, our judges are unaware that in some European countries the punishment of taking away a man's life has been abolished and that in other countries there is a steady current of opinion against inflicting this extreme penalty of the law.

## LORD CURZON ON OUR COURTS.

The Viceroy seems to have a very poor opinion of the administration of justice in this country. His Lordship is of opinion that famines can be largely prevented if the ryots will not resort to courts of justice as often as they do. There is some foundation for the complaint, but we are afraid that the Viceroy has misread the real nature

of the ryots' grievance. Having regard to the population of this land, it would be absurd to say that the people are unnecessarily litigious. The truth is that the cost of litigation has become very heavy and this is one of the factors leading up to the indebtedness of the ryot: The administration of justice in this country pays the Government, whereas in every other country it is a necessary drain upon the resources of the Empire. The reply of the ryot to the advice of the Viceroy will be not that he is losing his money by too much litigation, but that he is being obliged to pay too much for necessary litigation.

## THE VICEROY ON SOWCARS

The Viceroy's second remedy is no better than his first. His Lordship complained of the heavy rate of interest which ryots are obliged to pay on their loans. But his Lordship is here begging the question. Where would the heavy interest come in unless there was a need for borrowing? It seems ingenuous to argue that the ryot becomes indebted, because he has to pay heavy interest upon his debt. There is one consideration which we would like to place before the Government in this connection. Public servants are debarred from lending out. A rough calculation made by a public servant shows that in the hands of Messrs. Arbutnot and Co., alone, something like 50 lakhs of rupees belonging to public servants are stagnating. It may be sound policy to prohibit public servants from having monetary dealings with persons under their immediate jurisdiction. But it can serve no useful purpose to interdict their dealings all over the Presidency. If all the monies are in the market for lending out, the exorbitant interest complained of will not be so much in evidence. The High Court of Madras has caught the contagion readily. They have framed rules against Vakils carrying on trade or other business so long as they remain members of the legal profession. This seems to border on the ridiculous. What possible deleterious effect can a professional gentleman's trade or business have upon his services to his client and upon his capacity to present his case before the Judge? The truth is that the Government and the High Court have commenced to make rules without any regard to first principles. They are off the anchor and they hardly seem to know where they are drifting.

## REFORM IN THE LEGAL PROFESSION.

*The Bombay Law Reporter* reprints an article from the pen of J.J. Falconer, relating to the question of the amalgamation of the professions of the Solicitor and of the Barrister. We are not much concerned with the exact question discussed. We, however, agree in the conclusion of the writer regarding the reforms he suggests in the qualifications necessary for becoming a Barrister. He says:

'The training of all lawyers up to a certain point should be on the same lines, but with sufficient elasticity to admit of individual preference or ability in respect of the various subjects and branches of law. Without interfering with either the Inns of Court or Incorporated Law Society, and leaving students to attach themselves to either as they please, joint regulations should be made with reference to the education and examination of all law-students alike. There might be a joint Board of Education or Law University which should regulate these matters. Attendance for some definite period in the chambers of some lawyer in actual practice, and at law lectures or classes, would properly be one of the conditions imposed. There should also be a preliminary examination for all in general knowledge, subject to exemption or modification in the case of students who may have obtained a degree at one of the universities, or have passed certain specified examinations, and this preliminary examination should be at least sufficiently severe to guarantee that the student is at any rate an ordinarily well-educated man. This should be followed at proper intervals by a first and second examination in law, with certain exemptions or modifications on similar grounds as before.'

We think that there should be no difference between a Vakil and a Barrister in regard to their status in the profession. As this is a vast subject, we propose adverting to this matter on some future occasion.

#### RESTRAINT OF TRADE.

Section 27 of the Indian Contract Act was enacted at a time when in the language of Mr. Justice Kindersley in *Oaks vs. Jackson*, "trade was in its infancy in this country": We do not mean to assert that the boyhood of trade has passed away and that it has attained its full development. None the less, it seems to us that the time has come when the law upon this subject should be placed upon a more satisfactory footing than it is at present; *The Canadian Law Journal* in dealing with this subject points to certain conclusions which we think ought to form the basis of a legislative pronouncement on the subject. Our contemporary says:—

"It would seem the crucial test, in each case, has been reduced to this, whether the restraint is greater than necessary for the reasonable protection of the contractee. The reasonableness or unreasonableness of the contract and its sufficiency to protect the rights of the contractor is a question of law, and is decided by the Court and not by the jury. See *Mallon v. May* 11 M. & W. P. 652.

It is by tracing back to its source, we are enabled to see how progressive had been the science of the law, and by what slow, yet constant progress, it has evolved the admirable system it now presents, and justifies the truth of the maxim—that what is not reason is not law. Such a research also exemplifies the force of the aphorism—*Malus est pater fontes quam sectari rivulos*.

#### HOW SCIENCE MODIFIES LEGAL PRINCIPLES.

We reprint below a very amusing and instructive article from the *Green Bag* in which the inroad of science upon the domain of law is sketched out in the characteristic style of our contemporary:—

"A treatise on the law of evidence, of the imprint of 1800, would, in an hundred instances, need correctional notes for a new edition as to doctrines novel and indeed startling, of recent enunciation; and none so emphatically as in regard to the inroads which the progress of science has made upon old legal principles. When half a century ago photographs were allowed to be placed in evidence as aids toward or in verification of identity, and when the newly invented word telegraph came under the eyes of testimony as a judicial exception to the rule concerning hearsay evidence, many veteran lawyers shook their heads negatively and perhaps forebodingly. When chemists and other experts usurped the functions of jurymen in deciding weight of poisons, circumstances, or of handwriting or of insanity, challenges to the propriety of such innovations became rife in the profession. But stranger innovations seem impending. What, for instance, do octogenarian lawyers think of making affidavit by telephone with an affiant thousands of miles distant from the scrivener who is to prepare the deposition and from the notary who administers the oath over as many miles of magnetic wires? The procedure has been sanctioned in Supreme Court Chambers at New York city by Justice Beckman. A plaintiff residing within the New York jurisdiction named Rothier held a claim for moneys had and received against a Cincinnati broker named Altenburg, with opportunity to attach in New York certain property belonging to the latter. But the plaintiff was absent from New York and only he could execute the necessary moving affidavit. In this dilemma, and fearing that the attachable property might be removed from jurisdiction before plaintiff returned in *propria persona*, the absent plaintiff's attorney bethought himself of telephonic use. He caused, over the long-distance telephone, the plaintiff to be summoned to Cincinnati end of the instrument, and over it to dictate a deposition. A notary was with the plaintiff's attorney at the New York end of the telephone. Both attorney and notary could recognize and knew the plaintiff's voice. The ordinary telephonic call and salutations were had "You are Mr. Rothier," calls the notary, and answer came, "I am." The notary then administers the oath, and the plaintiff holding in his hand a Bible repeats it and kisses the book. Then the plaintiff, with mouth to the Cincinnati transmitter, to his attorney, with ear at the New York tube, recites a short affidavit and sentence by sentence the attorney repeats it to a stenographer who writes it all down and then it is moulded into an affidavit by the attorney, who swears to its contents on information and belief as derived that day from an orally sworn statement of the plaintiff made to him. Upon this affidavit, which further affirmed the voice in Cincinnati to have been that of the New York residential plaintiff, the Justice issued a warrant of attachment on the moneys in New York belonging to the Cincinnati defendant.

The next innovation may be a dying-declaration in a murder case talked in presence of witness into a phonograph from which to be repeated to a jury. Perhaps, too, kineoscopic pictures, taken by policemen during a riot or by a friend of a beaten wife during an altercation with the brutal husband, may be admitted in evidence. X-rays may also come into court under many circumstances, and become pretexts for deciding controverted facts; so that the chapter upon hearsay in the treatises of Greenleaf or Taylor may have to be re-written. Science, having had its innings in religious matters, can also play games with legal doctrines."

## Trade and Industry.

*By Mercantilist.*

### INDIAN MANUFACTURES.

In the November number of the *Indian Review*, enquiry was made by an "Indian" for particulars of factories and establishments wherefrom cloths etc. of purely Indian manufacture could be obtained. In reply to this enquiry, we have received two communications. Mr. Ganganatha Jha of Darbhanga refers 'Indian' to the following names: Indian Trading Company—Johnstonganj, Allahabad, Swadesi Agency—Chinsura, Bengal; Budhsingh Devakinandam Katra Benilal, Benares city; The Empress Mills—Nagpur; The Cotton Spinning and Weaving Mills—Ahmedabad.

### AHMEDABAD INDUSTRIES.

Another correspondent from Ahmedabad, without giving particulars of names, has favoured us with an account of the native industries worked in that city, in response to the query of "Indian" already referred to. Some Cotton Mills have been successfully producing cloths that are in no way inferior to those produced in Western countries. So far as texture is concerned, they are equally good, while in point of durability, our correspondent who has used them says that those made in other countries would suffer by the comparison. In confirmation of his testimony, he adds that the Ahmedabadis who are not so much animated with the spirit of encouraging native industries, have themselves, by reason of the good quality as well as the cheapness of the manufactures, begun to use them.

Ahmedabad is also famous for the production of silk-bordered *Mhotars*.

Besides cotton-mills, there is also a match factory in Ahmedabad which has survived the stage of liquidation and is now successfully working. The matches are used by many and are as cheap as, or rather cheaper than, those imported from foreign countries.

There is also a soap factory which produces tolerably good soaps. Many persons have used them. There are two opinions as regards their quality, but not as regards their cheapness. A box containing three good-looking and well-shaped soaps can be had for from 3 to 4 annas.

### COMMERCIAL MUSEUM.

The necessity of maintaining a museum of all commercial products, in which samples are collected and information supplied in respect of all articles, has been recognised by all civilized countries and provision made accordingly. In Stuttgart, for ex-

ample, samples of all goods available for export from Germany are collected together and price lists altered according to the fluctuations of the market are also maintained. It appears European exporters and American firms apply largely for information and samples at this depot and get all they want with minimum of trouble and correspondence. The economic gallery at the Calcutta Museum is intended to serve as the Commercial Museum of this country and the Director-General of Statistics or the Reporter on Economic Products answers all queries from the trade. But a single Museum for a vast continent is absolutely insufficient and there ought to be at least one for each Presidency or Administration.

### INFORMATION OFFICE FOR FOREIGN TRADE.

In this connection, it may be mentioned that the question of establishing an Information Office for Foreign Trade has recently been discussed in Berlin. To finance the affair, it is proposed that 3,000 firms should subscribe annually 5%, the Commercial Chambers two per cent. of their receipts, and from Unions, from the Empire, from the city of Berlin an approximate sum of 10,000*l.* is expected. The details of the work of the Information Office would consist in furnishing information respecting laws and decrees which relate to trade with foreign lands, duties on each single article, regulations as to certificates of origin, agents, commercial travellers, protection of patents, information as to means of transport, cost of freight to districts where goods are required, or from which goods may be obtained. One of the first duties of the Institution will be to warn small traders against speculative undertaking in foreign countries.

### COTTON OIL.

In the July number of the *Indian Review* appeared an article on the "Waste of Cotton Seed in India." It was there pointed out that the seed contained oil which was of high value both for culinary and commercial purposes and that it deserved thorough investigation at the hands of the capitalists and manufacturers in India. Attention is drawn to this subject in two articles in the October numbers of the *Indian Import and Export Trades Journal* and of the *Forum*. The world's supply of cotton seed every year is estimated at about 5 million tons, of which America alone contributes 80 per cent, the remainder being made up by India and Egypt. The yield of oil is not less than 250 million gallons, the bulk of which is produced in America.

The oil manufactured in the latter country appears to be far better than the article turned out in Europe and this is due to certain processes of refining which seem to be secrets not yet known outside America. One thing to



be noted, however, is that if the oil is to be used for culinary purposes, it ought not to have been refined by "blowing." When it is cold it is not easy to distinguish "blown" oil from other kinds, either by appearance or by taste; but if it is warmed, its real character will be brought out by its overpowering bad odour. The relative food values of wheat and cotton seed are thus stated by Mr. Johnson in his "Plea for the New Cereal, the Cotton Seed."

	Protein	Carbo-hydrates.	Fat.	Value.
Wheat	11.87	73.69	2.09	1.00
Cotton seed	17.57	10.82	20.19	1.39

#### PAPER FROM COTTON HULLS.

One more move has been made in the utilisation for commercial purposes of what was hitherto practically a waste product. As yet, the hulls of the immense quantities of cotton seed annually outturned from the cotton oil-mills in America were almost useless and all that could be done was to agglutinate and sell them as fire kindlings. But now the news comes from the Yankee and that the hulls are hereafter to be used as raw material for the manufacture of paper. The National Paper Making Company of New York, which has been recently started with a capital of a million sterling will shortly begin to manufacture paper from the husks of the cotton seed which lie piled up all over the south of the United States. The company is in possession of a new process for manufacturing pulp from the waste hulls and a distinguishing quality of the new product is that it will keep white and never turn yellow as wood pulp does. Another enormous advantage in favour of the new pulp is that it costs only £5 per ton whereas wood pulp costs three times more. The new company will compete with the gigantic "Paper Trust" of America and an appreciable reduction in prices may be looked for. It may also be hoped that the rapid denudation of American forests for purposes of manufacturing pulp which has been seriously commented on recently will be arrested and all apprehensions as to a "pulp famine" will be allayed.

#### IMPROVEMENT IN GLASS MANUFACTURE.

Her Majesty's Consul at Berlin in the course of a report on recent inventions and improvements in industrial machinery in Germany says:—

Glass manufacture has received an important impetus in the invention of an automatic glass machine. The invention has excited the liveliest interest among all hollow glass manufacturers, the most prominent members of this trade having been invited by the Glass Machine Syndicate of Berlin to examine and prove the working of the new machine at the glass works of Messrs. Schweig and Co., at Weisswasser, Obertaunitz, after which a congress of glass manufactures was held.

The results obtained were astonishing. With watch in hand, it was demonstrated that in one minute ten perfectly flawless glasses, all exactly alike, could be automatically pressed and blown.

The machine working in Weisswasser is the first of its kind in Europe, and is of such remarkably simple construction that the most experienced hands are perfectly astounded at the results, and were loud in their acknowledgments of the ingenuity of the inventor, Mr. Blue, an American.

The method of production is roughly as follows:—

The melted glass is laid in a form; the head of the article is formed, and by means of a valve, working with compressed air, the glass article is blown, after which process the article is finished in whatever form is required. An average time of eight seconds is required for the production of each article, and the machine works as regularly and safely as if metal articles were being punched. The finished articles were without flaw. It may be seen then that there is no waste by breakage, no necessity for cutting, no fear of defective articles, and no necessity to be dependent on skilled workmen.

#### Medical.

BY A DOCTOR.

#### THE CZARINA AS A NURSE.

Says the *Hospital Nursing Mirror*:—"The British as well as the Russian people are rejoiced to know that the Czar is making steady progress, and continues to gain strength. But we should be very sorry if the example he has set in having no nurse but his wife were followed by persons of rank elsewhere. The womanly devotion of the Czarina can only call for the warmest admiration. But it is admitted that she "is somewhat thinner owing to want of sleep and anxiety," which shows that the strain has been greater than she should have been called upon to bear. Further than this typhoid is one of the diseases which most urgently requires skilled nursing. Nothing could be more disastrous than to encourage the idea that any amateur, however unremitting her care and attention, is able, without serious risk, to nurse a patient suffering from typhoid; and we take the earliest opportunity of expressing our regret that the Czar's "only nurse" has been his wife.

To the majority of our readers this paragraph must be interesting news. When a lady of the exalted position of the Czarina shews to the world that the possession of riches and power do not necessarily carry with them a diminished sense of the duties that fall to the common lot, and when these duties that could so easily be passed on to others are discharged as they have been done, by Her Majesty, it appears strange that there should be cavilling at what calls for the warmest admiration. True it is that typhoid requires skilled nursing, but we may be sure that Her Majesty must have had no lack of instinct as to what the details of the nursing required were and backed

by womanly love and wifely devotion for her august patient, she has proved by the successful result of her labors that when the heart is in the work wonders may be accomplished.

#### NURSES ON HORSEBACK.

It is proposed by Mr. A. G. Hales, one of the war correspondents who have lately returned from South Africa, that Army nurses should be taught to ride until they are expert horsewomen. Mr. Hales says: "It seems to me that most of the modern fighting will be done by men who move rapidly in the saddle, and I cannot see why nurses should not accompany them. Each division should possess its own corps of nurses, who could take the field as rapidly as medical men do now." There can be no objection to nurses learning to ride, if they have the wish and the opportunity. The accomplishment may, at any time, prove useful, but the idea of making it a *sine qua non* for admission to the Army Nursing Service will not, we hope, be ever entertained for a moment. There are many women who, while splendid nurses, would never be at home in the saddle.

We are indeed living in a go-a-head age, and it will not be a surprise to hear that nursing as a profession will be still more in favour with the fair sex than at present. 'Can we not see in our minds' eye the dashing horses woman-nurse of the future, flying over the country, burning with enthusiasm and zeal to be in first not at the "death" but the "succour?" 'Can we not hear the murmur of admiration that would rise and the "well-ridden nurse" that would greet the dashing equestrienne who got to the front first?

Yes, we can; but as a damper to this bright picture is the cold hard fact that "many will be called but few will be chosen"—because the majority will tumble off!

#### NEW TREATMENT OF PLAGUE.

Mr. N. M. Paranjpe writes from Poona with reference to a new treatment of plague which has been tried there:—Our readers may perhaps remember that Seth Naranjee Dwarakadas of Bombay had opened a charitable dispensary here for plague, cholera, and other fevers. The dispensary was open from the 15th October to the 15th December 1900. Professor Gajjar's medicine was alone tried. The arrangements consisted in supplying medicines *gratis* to all those that cared to have them and, if necessary, visiting patients at their houses, free of charge. The results may be taken as fairly correct, making all allowances for the numerous inconveniences of out-patient practice in such a large city as Poona and in such a readily fatal disease as plague. The medicine naturally is an irritant and in a few cases it gives rise to troublesome symptoms such as vomiting and sore throat, but when sufficiently diluted and judiciously administered with a few precautions, the troublesome effects could be avoided in a great majority of cases. As far as my observation goes, the medicine does undoubtedly act a strong

germicide and it is for this important property that it should be considered as a potent instrument available in controlling such a ravaging disease as plague. The total number of plague cases treated was 640. The general average of cures is 44 per cent. If the number of patients who died within 24 hours, who cannot be traced or who gave up treatment were subtracted, the percentage would be higher still. However, the general average, as it is, is fairly satisfactory. It is of course premature to draw any final conclusions from observation of a few hundred cases but this much can safely be said that the medicine deserves trial.

#### BICYCLE RIDING AND HEALTH.

Dr. John B. Richardson has written a most sensible article in the *Medical Record* on the use of the bicycle from a professional standpoint, in which he takes a very moderate and conservative view of the subject, and in no way shows himself to be a prejudiced enthusiast.

Driving not only allows too little exercise, but is too often the cause of indigestion, sleeplessness, and many other disorders due to lack of exercise; while walking is too slow for a man in a hurry. The happy medium seems to be a bicycle.

Great care is necessary to have a machine that is suitable to the individual rider. The handles must be in the right place, and not so low that stooping is necessary; the saddle requires especial attention, as an ill-fitting saddle, or one at a wrong angle, causes great discomfort, and soon wearies.

Avoid riding like a jack-knife or indulging in too many spurts. In riding up-hill mouth breathing may be necessary, but in general the mouth should be closed; and long distance runs can only do harm. The pedals should be far enough away to make the rider stretch his legs out to full length while riding, and the erect position is the most healthful. Dr. Richardson sums up as follows:—

Rapid riding, or riding long distances at a rapid rate, is injurious in many ways to every rider, unless gradual and careful training has been gone through with that object. Gentle and moderate bicycle riding increases vitality, improves and enlarges lung and breathing capacity, develops the muscular (general) as well as special systems or sets, as also the heart's power; increases appetite and powers of digestion and assimilation, thereby adding to capacity for life and increased longevity; stimulates action of skin, and thereby eliminates more rapidly and perfectly effete materials from the system, thus aiding the kidneys when they are temporarily unable to perform their functions perfectly, or are organically diseased; is an excellent means for mental and physical diversion; causes many indolent persons, and those who lead sedentary lives, to exercise more freely, being pleasurable and easy to take after mastering the machine; is one of our best simple measures in the treatment of cases of insomnia; and last, but not least, is an agent in the moral culture of individuals in pleasantly diverting their minds and meeting their demands for occupation.

### Science.

*By a Master of Arts.*

#### KNOWLEDGE DIARY AND SCIENTIFIC HAND-BOOK.

The publishers of "Knowledge" the well-known high class scientific journal, have brought out a most interesting diary for 1901, which as a hand book of scientific information and a diary for practical and business purposes is exceedingly useful. The special features of this diary which distinguish it from others of its kind are an instructive summary of the advance of science in the Nineteenth century, illustrated with portraits of some of the greatest men whose work marks an epoch in the history of science; the astronomical notes and tables and an account of the astronomical phenomena of year, twelve star maps showing the night sky for every month in the year with descriptive account of the visible constellations and principal stars, and a photograph and detailed description of the gigantic telescope exhibited at the Paris Exhibition. A portrait of the late Prof. Huxley forms the frontispiece. The diary is priced 3s

#### THE PROGRESS OF INVENTION.

It has been said that the extent to which natural obstacles have been overcome indicates the rank of nations in the roll of civilized countries. If the number of patents obtained in a country may be taken as the standard, it would seem that the Americans are a head of all. According to a writer in the *Revue Technique* the number of patents obtained in various parts of the world, reckoning from the commencement until the end of 1899, was 1,893,837 and 93 per cent. of this number belong to the six greatest industrial nations.

These countries rank in the following order :—

United States	43 per cent.
France	15.6 "
England	14.7 "
Belgium	8.15 "
Germany	6.65 "
Austria-Hungary	6.15 "

#### SCIENCE IN THE NINETEENTH CENTURY

Mr Stead in the *Review of Reviews* for December, thus speaks of the victories of science.

Steam was in the ascendant from 1825 to 1875. From 1875 to the end of the century electricity has been steadily advancing to the leading position. Professor Alfred Russell Wallace, in his most interesting book, "The Wonderful Century,"—a fascinating survey of a great scientific period by a great man of science,—maintains that "To get any adequate comparison with the nineteenth century, we must take not only preceding centuries, but rather the whole preceding epoch of human

history." Dr. Wallace hardly does justice to the discoveries and inventions of prehistoric man in his comparison between the achievements of the Nineteenth Century and those of all previous time. But his summary of "the theoretical discoveries of our time, which have extended our knowledge or widened our conception of the universe," may be quoted with advantage as a careful recapitulation by an eminent scientist of what science has achieved in the Nineteenth Century :—

1. The determination of the mechanical equivalent of heat leading to the great principle of the Conservation of Energy.
2. The Molecular theory of gases.
3. The mode of direct measurement of the velocity of Light and experimental proof of the Earth's Rotation.
4. The discovery of the function of Dust in nature.
5. The theory of definite and multiple proportion in Chemistry.
6. The nature of Meteors and Comets, leading to the Meteoritic theory of the Universe.
7. The proof of the Glacial Epoch, its vast extent, and its effects upon the earth's surface.
8. The proof of the great Antiquity of man.
9. Establishment of the theory of Organic Evolution.
10. The cell theory and the Recapitulation theory in Embryology.
11. The Germ theory of the Zymotic diseases.
12. The discovery of the nature and function of White Blood-corpuscles.

#### DARWIN AND HIS INFLUENCE.

If the first part of the century was dominated by the genius of Napoleon, in its closing years the influence of Darwin was not less in the ascendant. The doctrine of evolution, with which his name is most prominently identified, may be regarded as the master-dogma of the century. Its subtle influence is to be felt in every department of life. It has profoundly modified our conceptions of creation, and it is every day influencing more and more our ideas of morality. Men are asking; why hesitate in consigning to a lethal chamber all idiots, lunatics and hopeless incurables? And in the larger field of national politics. Why should we show any mercy to the weak? Might becomes right. The unfit have no claim to survive. Wars of extermination seem to receive the approbation of nature. Mr. Rhodes is a Darwinian politician. Although his application of the full dogma is checked by many considerations some personal, others those of his environment. Nietzsche may be regarded as the first thinker to give the new tendency its full scope. We need not fear that mankind will take Nietzsche neat. But it seems by no means improbable that the twentieth century will be brought up in its earlier years on Nietzsche and water. The sun of the century rose, as it has set, in blood. It was the century of Napoleon and of Bismarck nevertheless it was pre-eminently a humanitarian century.

# THE INDIAN REVIEW

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*All contributions, books for review, should be addressed to Mr. G. A. NATESAN, Editor, Indian Review, Esplanade, Madras.*

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His Majesty, the new King, has under the express wish of his Mother assumed the title of King

Edward. With the exception of the unfortunate Edward II, who had to abdicate the throne, the memory of the Edwards who graced the throne of England is cherished with respect. The name of Edward I. will in particular be never forgotten. It was he, who, just six hundred years ago, confirmed the charters by which the kings of England for ever renounced taxation, direct or indirect, without the consent of Parliament: it was he who organised the law courts; and it was he who first made England and Wales one kingdom. May the New King Live Long and govern us with the same practical wisdom and benevolence which was the striking characteristic of his honoured and beloved Mother! This is the prayer of all India and the British Empire. Judging by the words of the Declaration which we quote below, there is every reason to believe that his reign will be in no way unworthy of his predecessors.

“ Your Royal Highnesses, my Lords, and Gentlemen,— This is the most painful occasion on which I shall ever be called upon to address you. My first and melancholy duty is to announce to you the death of my beloved Mother, the Queen, and I know how deeply you, the whole Nation, and I think I may say, the whole world sympathise with me in the irreparable loss we have all sustained. I need hardly say that my constant endeavour will be always to walk in Her footsteps. In undertaking the heavy load which now devolves upon me I am fully determined to be a Constitutional Sovereign in the strictest sense of the word, and as long as there is breath in My body to work for the good and amelioration of My people. I have resolved to be known by the name of Edward, which has been borne by six of My ancestors. In doing so, I do not undervalue the name of Albert, which I inherit from My ever to be lamented, great and wise Father, who, by universal consent, is I think, deservedly known by the name of Albert the Good, and I desire that his name shall stand alone. In conclusion, I trust to Parliament and the Nation to support Me in the arduous duties which now devolve upon Me by inheritance, and to which I am determined to devote My whole strength during the remainder of My life.”

It is interesting while reading the declaration of **Queen Victoria's** the New King to recall to our **Declaration.** memory at the present moment the noble words of our late Queen Empress when she was called to the throne.

These are the words : —

"The severe and afflicting loss which the nation has sustained by the death of His Majesty, my beloved uncle, has devolved upon me the duty of administering the government of this Empire. This awful responsibility is imposed upon me so suddenly, and at so early a period of my life, that I should feel myself utterly oppressed by the burden, were I not sustained by the hope that Divine Providence, which has called me to this work, will give me strength for the performance of it, and that I shall find in the purity of my intentions, and in my zeal for the public welfare, that support and those resources which usually belong to a more mature age and to long experience.

"I place my firm reliance upon the wisdom of Parliament, and upon the loyalty and affection of my people. I esteem it also a peculiar advantage that I succeed to a Sovereign whose constant regard for the rights and liberties of his subjects, and whose desire to promote the amelioration of the laws and institutions of the country, have rendered his name the object of general attachment and veneration.

"Educated in England, under the tender and enlightened care of a most affectionate mother, I have learned from my infancy to respect and love the Constitution of my native country.

"It will be my unceasing study to maintain the Reformed religion as by law established, securing at the same time to all the full enjoyment of religious liberty ; and I shall steadily protect the rights and promote to the utmost of my power the happiness and welfare of all classes of my subjects."



His Majesty The King, Emperor of India, has been pleased to send the **King Edward's** following letter, dated Windsor Castle, the 4th February, to the Princes and People of India. We are sure it will be read with deep interest all over the country as it is full of feeling and sympathy,

"To the Princes and People of India. — Through the lamented death of my beloved and dearly mourned mother, I have inherited the Throne which has descended to me through a long and ancient lineage. I now desire to send my greetings to the Ruling Chiefs of the Native States, and to the Inhabitants of my Indian dominions, and to assure them of my heart-felt wish for their welfare. My illustrious and lamented predecessor was the first Sovereign of this country who took upon Himself the direct administration of the affairs of India, and assumed the title of Empress in token of Her closer association with the Government of that vast country.

"In all matters connected with India, the Queen-Empress displayed an unvarying deep personal interest, and I am well aware of the feeling of loyalty and affection evinced by the millions of its peoples towards Her throne and person.

"This feeling was conspicuously shown during the last year of Her long and glorious reign by the noble and patriotic assistance offered by the Ruling Princes in the South African War, and by the gallant services rendered by the Native Army beyond the limits of their own country.

"It was by Her wish, and with Her sanction, that I visited India, and made myself personally acquainted with the Ruling Chiefs, the People, and the cities of that ancient and famous Empire.

"I shall never forget the deep impressions which I then received, and I shall endeavour, following the great example of the first Queen-Empress, to work for the general well-being of my Indian subjects of all ranks, and to merit, as She did, their unfailing loyalty and affection."

When the painful news of the death of Her Majesty reached India, doubts were expressed in many quarters as to whether her death will affect the existence of the present Parliament. The doubt does not seem to have been confined to India alone as we find several of the English papers devoting considerable space to explain it. Until the year 1867, the continuance of the Parliament was affected by the demise of the Crown. For instance, when in 1694 Queen Mary died, the then Parliament came to an end. William III. knowing his own life to be precarious, and having regard to the uncertainty of what might happen after him, as to the occupation of the throne, caused to be enacted a Statute for the continuing, meeting, and sitting of a Parliament, in case of the death or demise of His Majesty, his Heirs and Successors." This is the wording of the law passed by William —

"Whereas this Kingdom of England may be exposed to great dangers by the invasion of foreigners, or by the traitorous conspiracies of wicked and ill-disposed persons, whenever it shall please God to afflict these realms by the death of our Gracious Sovereign King William (whom God long preserve) or by the death of any of his Heirs and Successors to the Crown: For prevention whereof be it enacted that this present Parliament, or any other Parliament, which shall hereafter be summoned by His Majesty King William, His Heirs and Successors, shall not determine or be dissolved by the Death or Demise of His said Majesty, His Heirs and Successors; but such Parliament shall and is hereby enacted to continue, and is hereby empowered and required immediately to meet, convene and sit, and to act, notwithstanding such Death or Demise, for and during the time of six months, and no longer, unless the same shall sooner be prorogued or dissolved by such person who shall be next Heir to the Crown of this Realm of England in Succession."

This was the state of things up to the year 1867 when by Clause 51 of 30 and 31 Victoria Cap. 102, it was enacted that

"The Parliament in being at any future Demise of the Crown shall not be determined or dissolved by such Demise, but shall continue so long as it should have continued but for such Demise, unless it should be sooner prorogued or dissolved by the Crown.

A further provision was made for the demise of the Crown during a dissolution by 37 Geo. III, c. 127, s. 34. In such a case, the preceding Parliament is to be renewed for six months. And even this difficulty has been wholly surmounted by the Representation of the People Act, which makes the duration of a Parliament independent of the demise of the Crown. Thus the present Parliament will continue to exist unless dissolved by the Crown in the meanwhile.

Our readers will be glad to be informed that Among our Contributors. contributions from the pen of the following gentlemen will soon appear in the pages of the *Review*.

Dr. Alexander Hay Japp, F. R. S. E.

Sir John Jardine, Kt. C. I. E.

Herbert Baynes, M. R. A. S.

J. D. Rees, C. I. E.

Dr. Alexander Japp is a well known man of letters, is the author of several books, chief among them being "De Quincey's Life and Writings;" "De Quincey's Memorials"; "Hours in my Garden." He was also for many years sub-editor of "*The Contemporary Review*" under Dean Alford.

The name of Sir John Jardine will be familiar to many of our readers. As Judge of the High Court of Bombay and as an Anglo-Indian who took and has been taking exceptional interest in furthering Indian aims and aspirations, his name is yet gratefully remembered. He writes:—

"I hope soon to send you an article dealing with the intercourse between Anglo-Indians and the people insisting on knowledge and sympathy being acquired by study of the languages and history. I hope it may do some good."

Mr. Herbert Baynes, M. R. A. S. has favoured us with a contribution entitled "A Rosary of Faith-Sonnets on Religions of the East," which we soon hope to publish. Mr. Baynes is the author of several books, the most prominent one being "Ideals of the East," a book which was noticed in the columns of the *Review* some time ago.

Mr. J. D. Rees needs no introduction to readers in this part of the Presidency as they must all be familiar with his racy narratives of the tours of a former Governor of Madras and of the Duke of Clarence and Avondale in Southern India. His name has of late been appearing in several of the English papers and we are sure his contribution will be read with interest here.

## IN MEMORY OF VICTORIA.

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*With this number we commence a Series of Copyright articles on the Victorian Era. Among others the following will be published in successive numbers of the Review.*

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## In Memoriam.

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I

## VICTORIA, QUEEN-EMPRESS.

— o —

*Born 24th May 1819, Died 22nd January 1901.*

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THE longest reign in British history has come to a close. A venerable life has ended and the heart of the British Empire has been moved to its depth. The greatest sovereign of the nineteenth century has passed away from the stage of real life into history. The tie that knit together the hearts of millions of people in different parts of the globe has been snapped. 'Victoria the good, of ever blessed and glorious memory,' 'the Mother of Nations and many Kings', 'the Royal comforter in grief and sickness' is no more. The Great Queen who was blessed by Providence to attain the unique glory and distinction of having reigned longer than any British monarch; who attained a greater age than any of her predecessors on the Throne; who survived every member of the Privy Council: who outlived all but one of the peers who held their titles when she came to the Throne, and all but one of the members of her first House of Commons; who saw eleven Lord Chancellors, ten Prime Ministers, six Speakers of the House of Commons, at least three Bishops of every See and five or six of many Sees, five Archbishops of Canterbury and six Archbishops of York, and six Commanders-in-Chief; who saw seventeen Presidents of the United States, ten Viceroys of Canada, and fifteen Viceroys of India;

She, who was

The Queen of whole nature's crowning,

She, who

"Wrought her people lasting good",

She, whose

Court was pure,

Her life serene;

She, who

"A thousand claims to reverence closed

In her as Mother, Wife and Queen;

She, at whose council met statesmen

Who knew the seasons when to take

Occasion by the hand, and make

The bounds of freedom wider yet

By shaping some august decree,

Which kept her throne unshaken still,

Broad-based upon her people's will,

And compassed by the inviolate sea;

She, to whom

The path of duty was the way to glory;

She, who by her lofty sense of duty made the British Empire a grand force, around which all hearts were entwined, "to which the memory and people of the nation have clung with tendrils strong as flesh and blood, with which its triumphs and vicissitudes have been identified, with which its noblest aspirations, to most passionate aims have grown;" she, who had the rare gift of winning and retaining the most genuine and enthusiastic loyalty even of men and women who had never seen her face; she, who amidst sad domestic bereavements still devoted her health and strength to work for the good and happiness of her dear people and empire; she, who, as a young girl "exposed to all the splendour and temptations of the greatest of thrones" had been able to preserve to the end of her life, "a reputation" not merely unclouded—for that would not be much—but "one that has exalted human nature itself"; she, who made princes and peasants vie with one another in building a monument of her in their hearts;

She

Whose gentle spirit drew,

As doth the sun the dew

Our hearts to her alike in joy and sorrow;

She, who has strengthened the cause of monarchy all over the world; she, who has made even ardent and devoted Republicans ungrudgingly make a reservation in her favor

—she is no more. Yes, she is no more. On Tuesday, the 22nd January, in the stillness of the night which echoed the intense sorrow of the world, Queen Victoria passed away in peace. Queen Victoria is dead. How difficult to realise it! For to many she was a part of the natural order of things, a thing as certain as "the rising and setting of the sun." *Truth* never uttered greater truth than when it wrote—"It is not too much to say that never in the history of the world has a single death caused such universal grief." Lord Curzon in one of his happy veins observed many years ago:—"For Parliament, perhaps, the Englishman cares little, but for the national flag, he cares a great deal. The toast of the Queen is drunk with as boisterous a fervor in far off Kathay as at a Unionist banquet in St. James' Hall." This was no exaggeration. For the Queen was the bond and symbol of the Empire. And here we may recall to our afflicted minds a magnificent passage from a speech made by Lord Rosebery on the occasion of Her Majesty's eightieth birthday celebration. "My lords and gentlemen," he said, "great as the Empire is, vast as is its wealth, inexhaustible as are its resources, unbounded—and this is, perhaps, most important of all—as is its influence, what is the bond that unites it to the one hundred, the two hundred, the innumerable millions of India, the English, the Anglo-Saxon population, scattered all over the world—some with one particular form of Constitution and some with another, some with one tariff and some with another—what is the bond that connects all these? What but the Queen?"

One is tempted to write on in this strain. For, the story of Her Majesty's life, as daughter, wife, mother and Queen is unparalleled, and it would be presumptuous even to attempt to usurp what is undoubtedly the fit and lofty theme of many a great poet, biographer and historian of the future. The Victorian Epoch will live in history as one of the brightest which has ever been recorded in its pages. To use the words of the great Statesman already quoted, "Thrones and powers, dominions and sceptres



crumble and pass away, as history tells you, but I believe that this pure and powerful reign will not pass away—that it will remain embedded in history for long centuries to come, and will have its influence over generations yet unborn and countries that perhaps have yet to spring into existence under the auspices of the Anglo-Saxon race.”

To us in India, the memory of Her Majesty will ever be green. Our children and our children's children will never forget the Queen's Gracious Proclamation. If, in the distant future, we are to realise the dream of Macaulay and if the English nation in its over-flowing generosity will have granted us free political institutions, we owning an unflinching allegiance to the great British empire, then will posterity begin its new political life by unfurling the national flag on which will be writ in letters of gold, the words of the Proclamation of the good Queen Victoria. When, however, occasions may arise and our aims and aspirations are curbed, even then shall we think of Her Majesty and Her Proclamation—but, perhaps, with redoubled sorrow. To us Indians of this generation and for generations yet unborn, the Proclamation will be our sacred political Veda and it will be possible to forget the memory of the great and noble Queen, who is its author, when we have fallen so low as to forget our divine Sage Vyasa, the author of the Veda.

Let us now offer to the Dead Queen, the same beautiful prayer which Tennyson offered to the dead Prince Consort in the “Idylls of the King.”

“ May all love

His love unseen, but felt, o'ershadow thee,  
The love of all thy sons encompass thee,  
The love of all thy daughters cherish thee,  
The love of all thy people comfort thee,  
Till God's love set thee at His side again!”

—o—

## In Memoriam.

II

### VICTORIA QUEEN-EMPRESS.

*Born 24th May 1819, Died 22nd January 1901*

IF AR and wide over the whole world there is mourning for the great Monarch who, for upwards of sixty-three years, ruled with such wisdom and such grace the vast and scattered possessions of the British Empire, and who united in her person, with such infinite tenderness and tact, the highest qualities of Woman and of Queen. The lament with which all nations follow to-day the latest royal capture won by Death has nothing in common with the customary platitudes of a people's grief. Other rulers have been in other times as great. Some few amongst them, too, have been as good. But as the memory runs backward over the long line of Sovereigns who since the Norman Conquest have welded their names in history with the British Isles, it pronounces, without hesitation, ultimate judgment for the longest combination of the greatest good in favour of the Lady who is lately dead. It is no light thing for three and sixty years so to have held the scales between conflicting political parties as to have earned the praises of the most censorious critic. Censure and blame have been accorded the actions of her predecessors. Her sacrifice of self to the interests of her people was complete. At no time in her long tenure of power did she permit personal inclination to encroach upon her duties of constitutional sovereignty. No touch of political reproach rests upon the memory of Victoria.

Whatever record leap to light,  
She never shall be shamed.

It is a great thing to have been a great Queen. To some, as to me, it is a greater thing to have been a great Woman. The greatness of the Sovereign rests, in no small measure, upon the greatness of her statesmen

Who know the seasons when to take  
Occasion by the hand.

But the greatness of the Woman rests upon the innate nobility of character which survives the atmosphere of courts and outlives the recurrent appeals to the selfishness of life. In that nobility Victoria was rich, a richness to which is principally due the unison today in sorrow of all the nations of the earth. The traditional picture of the velvet robe and the imperial diadem, of the crown and sceptre, the outward paraphernalia of monarchy, retains possibly a fascination of its own. But it is not in the pomp and pride of regal and imperial power that there will be found the key to that outburst of passionate, yet genuine, grief which rings the whole world round. The splendour of our great Mistress was the splendour of the Woman who in all her acts of state tempered and graced, perhaps unconsciously, the bare justice of pure temporal power. The historian of to-morrow will dwell with just admiration on her true and practical conception of constitutional rule. But the tears which darken the vision of millions who never looked upon her presence spring from no recollection of her politic worth. What moves mankind, careless of stars and titles and the remembrances of a sceptred sway, is the recognition in her of that well of inexhaustible gentleness which sent her home sobbing when she had despatched her Household troops to the trenches of the Crimea, to suffering, to privation and to death; which endeared her name to the humblest sailor who gladly exchanged his life for fresh lustre to her flag; which made her so quickly responsive to the desolation in the cottage homes of her peasantry; which in remembrance of her own widowhood—borne with such prolonged yet un murmuring patience against the hour, now struck, which should reunite her to the arms of her long-lost yet well-beloved—made her so pitiful and sympathetic to the widow of low degree. It is easy to bestow a coronet or a garter; to preside with dignity over the estates of the realm; to fill the stately palaces with varying degrees of flatterers; to flaunt a royal name in treaties which shall fill the current commentator with panegyric and the future historian

with dismay. But there is a nobler ambition and a greater victory than these; the ambition to deserve the poem of her children's children 'she wrought her people lasting good'; the victory which on its banners emblazons the watchwords of Peace and Sympathy and Love. To all, Victoria was a Queen. To many, she was a Mother. To more, a Friend. What sublimer monument could Queen desire or subjects give than the spontaneous and abiding sorrow which only love can summon and which not even death can quench?

The Englishman exiled in India has followed with glad interest the march of progress under his great Queen's rule. He has comforted himself with the reflection that England, pointing the way to liberty and law, has stood in the vanguard of the nations, while new peoples and growing communities have quickened into the consciousness of political life under the ægis of the Union Jack and the heart-stirring strains of "God save the Queen." His cheek has flushed with pride at the knowledge that where Victoria has planted her standard, there generally free laws and free speech, religious tolerance and popular representation have taken firm root to foster and expand the nascent energies of a few scattered families into the solidity of acknowledged, vigorous and responsible commonwealths. Much of this prosperity he has been ready to ascribe, under God's providence, to the wisdom, the unselfishness and the statesmanship of the Queen. But in the present hour of his tribulation and his pain he will not turn to the recorded achievements of the Victorian era, to the discoveries of science, to the reform of law, to the conquest of new territories, or to the marvel whereby an increased political franchise to the people has resulted in the increased stability of the Crown.—he will not turn to these for consolation and relief. Rather will the exile, himself hungering for love of wife and child, turn to the picture of his Queen as he has known her all his life, the centre of her domestic circle, encom-

passed by the inviolate love of many generations of grateful descendants. Amongst these his imagination will paint his Sovereign—herself “in her simplicity sublime”—no longer the Queen, but the Woman, overflowing with innocent mirth and cheeriness and love, the ideal mother of an English home. In the fulness of her fireside happiness he has found some little compensation for the curtailment of his own, and his first impulse will be a sense of wide compassion for the household which shall no longer thrill at the presence of its beloved Mistress nor answer to the music of her voice. For more years than he has cared to count, the rest and purity of his Sovereign’s inner life have tended to sweeten and humanise his own existence from which the exigencies of health and climate and education have removed the softening influences of children’s prattle and the tenderness of a woman’s touch. They have helped, possibly, to break down some of the human barriers which man has erected to shut out his neighbour from himself. If amid the scentless flowers and songless birds of India the domestic happiness of the Queen has at times called up a wistful sigh for the sober songsters and the hedge-row sweets of home, its remembrance will long prevail to cheer him on his path of duty with the moral of its charity and the lessons of its peace. The living source of influence is taken. The influence itself survives.

“The broken lily lies—the storm is over-past.”

To the peoples of India Victoria was only an abstraction. Yet, it is true that her name is cherished here as no other royal name has ever been. The secret of her hold lay in the beauty of her life, in her unfailing generosity of political instinct, in her leaning to the person rather than the policy. Her humanity has won its reward. It has enthroned her as an incarnation in many a humble Indian home whose occupants never knew the names of her local lieutenants. It has entombed her in millions of hearts which have throbbed in harmony with hers in her mourning for her stricken children. Men who have never seen her have sought

to lighten her afflictions by themselves voluntarily sharing something of her burthen. With her, indeed, one touch of nature has made the whole world kin, and the tribute which India joins that world in paying to her splendid memory, a tribute which the proudest may be proud to win, is the tribute of a reverent personal esteem, strong to pierce the mists of distance and the panoply of royalty, to find and revere the lineaments and the virtues of a sweet, a tender and a pitiful Woman. Educated native India still holds that to the personal intervention of her dead Queen she owes not merely the letter of the Royal Proclamation but the spirit of its wise and comprehensive charity which, proof against the dripping horrors of the Mutiny, extended forgiveness and implanted hope, promising redemption to the innocent generations which were yet to come from the fury of their fathers and from passions red with blood. No death can rob the giver of that Charter of the gratitude which her gift evoked. India stands orphaned to-day, for her great Mother is dead. She heads the march of England’s dependencies as they file past Victoria’s grave, silent and tear-stained, to take their last respectful good-bye of their Mistress and their Friend. Outside the British Isles she is Chief Mourner. Not for a day, nor a month, nor a year, but for all time as she places her *immortelles* upon Victoria’s tomb she knows that her respect shall endure and her love survive and the echoes of her mourning reverberate through the distant ages for the best and greatest among the many good and great who sleep their last sleep in the stately stillness of Royal Windsor.

“Till the Future dares

Forget the Past, her fate and fame shall be  
An echo and a light unto eternity!”

EARDLEY NORTON.

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### THE EXPANSION OF THE EMPIRE.

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It may safely be predicted that to the future historian of the nineteenth century few, if any, of the phenomena it presents will be of deeper interest than the expansion and consolidation of the British Empire during the reign of the noble sovereign whose loss we are now mourning. The marvellous development of the United States, and the growth of Germany as a united empire are facts that are of the first importance historically, and of which the issues will be far-reaching indeed. But whatever may be taken as the basis of comparison, whether area, population, or the complexity of the problems involved in its existence, the British Empire must be pronounced to be a more striking historical phenomenon than even these great states.

To deal adequately within the limits of a short article with the expansion of the British Empire is impossible. Even if we excluded from our purview the United Kingdom, the centre of the Empire, the subject would remain too vast. To see this we have but to contrast the condition of the greatest of the colonies and dependencies in 1837 with their condition at the present day.

When Queen Victoria ascended the throne Australia was chiefly of importance as a penal settlement. Gold had not yet been discovered, and the tide of emigration into it flowed but slowly. The five great self-governing colonies had not yet been organised; some of them did not even exist. Now we have a Federated Commonwealth of Australia, the germ of a future empire, the establishment of which fitly inaugurated the new century; and its increase in population, wealth and well-being of all kinds has kept pace with its political development.

Canada in 1837 was not the prosperous Dominion we know by that name to-day. Canada then consisted of two disunited and sometimes

hostile provinces. Lord Durham had not yet written his famous report which showed how colonies should be governed, and which has benefited not only Canada but all the colonies that have received representative institutions. It was not till 1867 that the Dominion was formed, and it was not till 1870 that the enormous territories ruled by the Hudson's Bay Company were brought into the Federation which now includes all British North America except Newfoundland. Since the Dominion was formed Canada has progressed with extraordinary rapidity, especially since the building of the trans-continental railway, known as the Canadian Pacific Railway, which has opened up the mineral and agricultural wealth of British Columbia, Manitoba and the North-Western Territories.

In India the changes during the Queen's reign have been of a different nature, but they have not been less extensive or less important. The second half of the nineteenth century has seen the expansion of trade, the establishment of the railway and the telegraph systems, and the organisation of education on western lines; above all it has witnessed the disappearance of "the Company" as a ruler and the transference of its dominions to the Crown with all that that implies.

It is unnecessary to refer to other colonies or dependencies save that it may be mentioned that in 1837 the colonisation of New Zealand can hardly be said to have been begun, while in South Africa settlers of British birth were still few and far between. Enough has been said to indicate the vast expansion that has taken place within the Empire. To display it adequately it would be necessary to supply elaborate tables of statistics showing for each part of the Empire the growth of trade, of industry, of population, and of wealth, and even then it would be but the material progress that would be dealt with. There has not, indeed, been equal prosperity in all parts of the Empire, for economic and political causes of different kinds have forbidden that;

but speaking generally we may say that during the reign of Queen Victoria the history of the internal development of the British Empire and its resources has been one of steady and sometimes of marvellous progress.

While the expansion of the Empire, in the fullest sense of that expression, cannot be adequately treated in a brief space, it is possible to sketch roughly the steps by which additional territories have come under the British flag since 1837, and this is all that will be attempted in the present article. The expansion spoken of will be the actual territorial expansion of the British Empire and not the development and internal progress of the countries which form it. For convenience sake it is best to deal with the different continents in turn.

In Europe the British Empire has grown smaller rather than larger during the Queen's reign. When Queen Victoria ascended the throne on the 20th June 1837 the territories over which she ruled, though vast, were not so great as those over which her immediate predecessors bore sway. By the Salic Law she was prevented from succeeding to the throne of Hanover and thus her uncle, the Duke of Cumberland, became King of Hanover in succession to King William IV. Hanover, however, though ruled by the sovereigns of the United Kingdom, had never been part of the British Empire, and its passing away from the sceptre of British monarchs was probably the means of averting international complications which might have involved Great Britain in the wars that led to the formation of the German Empire. Two British possessions in Europe have, however, been given up during the Queen's reign. In 1864 "the United States of the Ionian Islands," which had since 1815 been under a British protectorate, were incorporated with Greece; and in 1890, when an agreement about annexations in East Africa was being made, Heligoland, the little island in the estuary of the Elbe which had been in the possession of the British since

1814, was ceded to Germany. With these exceptions it may be said generally that in every place where the Union Jack flew in 1837 it still flies to day.

Turning to Asia we naturally first mention Cyprus which came under British rule by the Turkish Convention of 1878. One of the most recent additions in Asia, Cyprus has been one of the least useful. Very different has been the case with Aden, the first addition that was made to the dominions of the Queen. Aden which was annexed in 1839 was important even then, but it has become vastly more so with the opening of the Suez Canal and the development of trade by the Red Sea route. It has been fortified and it is now to Great Britain as regards the Red Sea what Gibraltar is as regards the Mediterranean. Britain's hold on the Red Sea was still further strengthened when the barren rock of Perim which lies in the narrow straits of Bab-el-Mandeb was occupied in 1857 and turned into a coaling-station. The acquisition of part of Somaliland on the African coast in 1884 and of the large island of Socotra in the Indian Ocean in 1886 has given Britain increased control over the entrance to the great highway from Europe to the East.

Even more important for trade at least than the occupation of Aden was the acquisition of Hong-kong in 1842 after the war with China. Under British rule Hong-kong has grown with marvellous rapidity. In 1841 it had but 5000 inhabitants; now its population is about quarter of a million, while it has become the chief commercial centre of Southern China, if not of the Far East. In 1861 part of Kowloon, the peninsula on the mainland opposite Hong-kong, was ceded to Britain, and during the recent scramble for Chinese territory on the part of the European powers a considerable addition was made to the territory on the mainland under British rule. In this connexion may also be mentioned the recent acquisition of Wei-Hai-Wei in Northern China as a counterpoise to the

Russian occupation of Port Arthur and Talienwan.

The places just mentioned are of importance because of their geographical position rather than for the extent of the territory they contain. The case is different when we turn to India where during the Queen's reign whole kingdoms have been brought under her sway. The annexation of Sind in 1843 and of the Panjab in 1849 and the acquisition of the Danish settlements, brought the whole of India into the British Empire, save the possessions of France and Portugal, and extended the boundaries of the Empire up to the wild regions of Beluchistan and Afghanistan. Since then there have been further extensions to the west and north-west though not of such an important nature. The war with Afghanistan in 1878 led to a rectification of the frontier by which the important passes came into the hands of the British, and the frequent small wars to which the unruly habits of the wild tribes on the north-west frontier have given rise have led to the extension of the frontier to the Hindu Kush. On the south-west frontier the expansion has been brought about more peacefully. The Khan of Kelat, who is now virtually a feudatory prince, ceded Quetta and the surrounding country in 1887; and it is not too much to say that Beluchistan is now practically under British control. The acquisition and defence of our present western and north-western frontiers have been a heavy drain on the finances of India, but the dangers of foreign aggression are so well-known that no thinking man will grudge the expenditure of what is necessary to ensure that hordes of invaders, breaking through the mountain barriers of the north-west, shall never again ravage the plains of India.

The largest addition that has been made to British India during the latter portion of the Queen's reign is not, properly speaking, in India at all. In 1885 Thebaw's unfriendliness and folly led to a war between Burma and Britain, and as

the result Upper Burma became part of British India in January 1886. Already in 1852 Pegu had been ceded, but now there ceased to be a king of Burma and all Burmese territories came under British rule. One important result of this extension of the empire is that in the extreme east the British Empire now touches the dominions of France and China.

Passing south we find that in the Malay Peninsula, to the south of Siam, British rule has made great way during the last thirty years. Malacca, Penang, and Singapore were already British possessions in 1837, but since 1874 Johore, Pahang, Perak, and other states have come under British protection. Of comparatively recent growth also is the establishment of British power in the island of Borneo. The existence of British influence there is chiefly due to Sir James Brooke who for his assistance to the Rajah of Borneo received the territory of Sarawak which he converted into an independent principality. In 1846 Britain purchased the island of Labuan, and in 1847 the Rajah of Borneo agreed not to part with any of his territory except with the sanction of the British Government. The British North Borneo Company which received a charter in 1881 has acquired and opened up a large amount of territory, and in 1888 Sir James Brooke's nephew and successor placed Sarawak under British protection. Thus practically the whole of North Borneo is now part of the British Empire.

In Australasia there was comparatively little room for territorial expansion. Though the colonisation of Australia and New Zealand have taken place chiefly during the Queen's reign, these countries were already British possessions when she came to the throne. But half of New Guinea, the second largest island in the world, still remained unattached to any European power. The people of Queensland were anxious that it should be annexed. On one occasion they actually proclaimed it to be British territory, but their action was disallowed by the home authorities. In the early

eighties when the desire for colonial expansion fell upon Europe, eastern New Guinea and the adjacent islands were one of the parts of the world with which Germany sought to appease its 'earth-hunger.' Then the British Government felt compelled, in the interests of the Australian colonists, to claim the southern portion of New Guinea, and in this way 90,000 square miles were added to the Empire. It is unnecessary to refer to various small islands that have become British possessions at different times. It is enough to mention the annexation of the Fiji group in 1874, and the recent agreement with Germany and the United States by which Great Britain gave up its claims to Samoa and accepted the protectorate of Tonga.

It is when we turn to Africa that we find the most enormous additions to the Empire that have been made during the Queen's reign. The causes that have led to this expansion are of different kinds, but perhaps the most important is the "earth-hunger" referred to above. France and Germany have since 1880 vied with one another in adding to their colonial dominions. Their action may have been due partly to the desire to enjoy the glory of possessing world-empires similar to that of Great Britain, but in a great measure their underlying aim was the extension of their commerce. Unfortunately the old view that a colony exists for the benefit of the mother country is a view that is still largely held on the Continent. Hence annexation by a foreign power of territory in Africa or elsewhere usually means the injury, if not the exclusion, of British commerce. The policy of "the open door" is practised by few countries but Great Britain, and therefore in self-defence, and often much against her will, Britain has been led during the past twenty years to add great territories in Africa to her already vast dominions.

Further it is during the past fifty years that the true character of Africa has been made known. A glance at an atlas thirty or forty years old will

show how complete was men's ignorance of the nature of Central Africa. Thanks to the labours of Dr. Livingstone and other intrepid explorers, that ignorance has been dispelled, and, amongst other results, the potentialities of Africa both as a market for imported goods and as a producer of mineral and other wealth have been made known. Naturally enough, Britain has shrunk from seeing herself shut out from lands that have been opened up chiefly by the labours of her own sons.

In 1837 the British possessions in Africa consisted of Cape Colony and a few trading ports on the west coast. The first addition that was made was, like the very latest, due to a conflict with the Boers. Some of the Boers who "trekked" from Cape Colony because of their dissatisfaction with British rule set up a republic in Natal. This republic was put down and Natal became a British possession in 1843. In 1848 the Orange Free State where more of the discontented Boers had settled was annexed, but in 1854 it was restored, only to be re-annexed finally last year in consequence of its having foolishly thrown in its lot with the Transvaal. The history of the Transvaal is too well-known to need recapitulation. The retrocession of the Orange Free State in 1854 and the fact that the Boers were allowed to set up a state of their own in the Transvaal show how very little desire there was for the expansion of the Empire in South Africa fifty years ago. For quarter of a century it was the same, and even in 1879 when the Zulu power was broken, Zululand, unfortunately for its inhabitants, was not annexed. It is not too much to say that it was the appearance of Germany and France on the scene that changed British policy in Africa. In 1884 German colonisation began. The German flag was hoisted at Cameroons, and at Angra Pequena north of the Orange River. Both of these places were regarded by the British as being in what would now be called their "sphere of influence," but the German "colonisation" went on in spite of that. At the same

time Germany had in contemplation, as Bismarck's Life shows, the annexation of St. Lucia Bay in Zululand. Had this been carried out and had the German colonies on the west coast been allowed to extend indefinitely eastwards, the expansion of British South Africa northwards would have been prevented. There can be little doubt that this was the aim of some at least of the colonial party in Germany. They fancied that the Boers, to whom the Transvaal had been given back recently, would be more friendly to Germany than they were to Britain, and they dreamt of 'a United South Africa, united not under the British, but under the German, flag. Any ideas of this kind were checked by the annexation of Bechuanaland in 1885 which interposed British territory between the German colony and the Transvaal, and by the annexation of Zululand and all the east coast up to the Portuguese possessions.

The extension of the British Empire north from Bechuanaland will always be associated with the name of Mr. Cecil Rhodes. Through his influence the British South African Chartered Company was formed in 1889. The territories which it acquired extended from the north of Bechuanaland up to the Zambesi, including Matabeleland and Mashonaland. To this enormous territory the name of ~~Nambesia~~ was given at first, but now it is better known under the name of Rhodesia. As the Portuguese had a shadowy claim to part of the territory occupied by the Company, there was at first considerable friction with Portugal, but at last all these difficulties were settled amicably. Since 1890 Rhodesia has passed through troubles of various kinds, some due to the mistakes of its administrators, but there can be little doubt that it has a great future before it and that when peace is restored in South Africa, it will be rapidly developed. Its capital Bulawayo is now connected with Capetown by a railway which forms the first instalment of the line which will yet connect the Cape with Cairo.

Part of the friction between Britain and Portugal to which reference has been made was due to a claim the Portuguese put forward to territories in the neighbourhood of Lake Nyassa in which British mission and trading stations had been established for several years. Long before Cecil Rhodes and his schemes were heard of, the Scottish churches resolved to commemorate the life and work of the famous Scottish missionary and traveller Dr. Livingstone by establishing a mission in Central Africa. This was done quarter of a century ago, and mission stations grew up on the shores of Lake Nyassa and in the high country near it. Shortly afterwards the African Lakes Company was started which successfully introduced coffee-growing and opened up the country, while it assisted in counteracting the doings of the Arab marauders who carried on the infamous slave-trade in Central Africa. The prosperity of these British settlements made the Portuguese anxious to claim the territory on which they were established, but ultimately Portugal gave way and British Central Africa which was already British territory in reality became British in name. Thus by the arrangements of 1890 British territory now extends from the Cape up to Lake Tanganyika where its further progress northward is barred by the Congo Free State and German East Africa.

When we traverse the immense tract of country that goes by the name of German East Africa we once again find ourselves under the British flag in British East Africa. The acquisition of this colony was due to the same causes as led to the immense expansion in the south. For long British power had been regarded as supreme at Zanzibar and all along the east coast of Africa, and most of the great lakes of Central Africa had been discovered by British subjects. It came therefore as a kind of shock when it was announced that Germany was asserting proprietary rights to most of the land dominions of the Sultan of Zanzibar and to the "Hinterland," i.e. the territory extending into the interior from the coast. It is to the



energy and foresight of Sir William Mackinnon, the founder of the British India line of steamers, that Great Britain owes the territory which she has saved from becoming a German colony. Concessions were obtained by him from the Sultan of Zanzibar, and the East African Chartered Company was formed. Ultimately a huge tract of land to the north of what the Germans had occupied became British. This tract extends inland to the shores of the Victoria Nyanza and includes the kingdom of Uganda. In 1890 Zanzibar itself and the neighbouring island of Pemba were placed under a British protectorate. The East African Company did not find it had made a profitable investment and decided to abandon Uganda. Public opinion at home, however, forced the Government to take over Uganda and not long afterwards all the territories administered by the East African Company passed under the direct control of the Crown. A Railway is now being made which will connect Uganda with Mombassa, the chief port in the new colony, and which cannot fail to open up the country and to develop its resources.

During the same period and for similar causes the empire was expanding in the west of Africa. There the rivals of the British were the French rather than the Germans. Thirty years ago, the French and the British possessed a few trading ports on the west coast of Africa. Gradually, however, the French extended inland and occupied, or laid claims to, a great extent of territory. Three distinct yet connected aims may be traced in the French policy. They sought first to connect their colonies on the west coast with their colony of Algeria on the north, next they aimed at surrounding the British colonies with French territory which would prevent their development and their extension inland, and lastly they sought to stretch French territory across the continent from their possessions on the Congo to the Red Sea. At the same time Germany made an effort to get possession of part of the Niger basin. Britain at last bestirred herself, too late to prevent some of her

colonies from being hemmed in by France, but in time enough to secure a huge addition to the Empire. In this case also, a chartered company was the means of securing territory and trade for Britain; for it is not too much to say that it is owing to the work of Sir G. D. T. Goldie and the British United African Company—the Niger Company as it was more commonly called—which he inspired, that Great Britain to-day possesses its new Colony of Nigeria. Several times the friction with France was very great and it was not till 1899 that an Anglo-French agreement clearly delimited the territories of the two countries. Since then Nigeria has passed from the Company under the direct control of the Crown.

The Anglo-French agreement just referred to settled an even more dangerous question, a question which at one time brought the two countries within measurable distance of war. In pursuance of the aim of girdling the African Continent with a belt of French territory and of securing a hold on some portion of the Nile valley, the French had, in spite of British warnings, sent out expeditions eastward which had established a series of posts, the most advanced of which was at Fashoda on the Nile. When this was discovered after the defeat of the Dervishes at Omdurman by Lord Kitchener in September 1898, Britain insisted upon the evacuation of Fashoda. For some time things looked very threatening, but at last the French consented to withdraw, and by the agreement made in 1899 Britain became supreme in the Nile valley from its sources to the sea.

Any account of the development of British power in Africa would be incomplete without some reference to Egypt. The disturbances in Egypt in 1882 led to the armed intervention of Britain, and since that date Egypt has virtually, though not in name, been under British protection. The result has been most beneficial to Egypt, as all unprejudiced observers admit. The last benefit was the re-conquest of the Soudan by which Egypt has been freed from the dread of invasion

by hordes of savage fanatics. The Soudan has been reopened to civilization, and under the new Anglo-Egyptian rule may be expected to enjoy a prosperity to which it has long been a stranger.

Of the American continent there is but little to chronicle. During the Queen's reign the boundary between British North America and the United States has been fixed, but there yet remains a long-standing and still unsettled dispute as to the boundaries of Alaska. The question of the boundaries of Venezuela and British Guiana assumed a very threatening form in the beginning of 1896 but the question has been amicably settled by arbitration. Whether the British Empire has been increased or diminished by these agreements depends upon the view taken as to the justice of the respective claims of the contending countries.

The territorial expansion of the British Empire during the reign of Queen Victoria has now been traced. Along with this expansion has gone a change of views as to the value of a Colonial Empire. Not more striking than the growth of the Empire has been the growth of what, for want of a better name, may be called the imperial idea. It is not so very long since the feeling was commonly expressed that colonies are encumbrances which are useful, perhaps, if they afford opportunities for emigration, but which should be encouraged to hive off from the parent state as soon as they are able to manage their own affairs. Now, while there is no return to the old idea that the colonies exist merely for the benefit of the motherland, there is the grander idea of a great federation of peoples under the British flag, enjoying the liberty that is ever found under that flag and working together for the benefit of the whole Empire. Whether there can be a closer political federation than exists at present between the different parts of the Empire is a problem for the future to decide, but even now the conception of "Greater Britain" is influencing men's minds and inspiring their imaginations. The spectacle we have witnessed in South Africa of the colonies rallying to the support

of the mother-country is but one indication of the growth of this feeling. It would be interesting to trace the causes of the change, but it must suffice now to say that when the time comes to estimate the forces that have brought about the feeling of oneness with which the Empire has been of late increasingly knit together, one of the most potent causes will be found in the love and affection inspired in all her subjects by the great and good Queen Victoria.

E. MONTETH MACPHAIL.

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## INDIA UNDER VICTORIA.

There is, indeed, no part of the Great British Empire which brings out, like India, the special features of the memorable reign of our late Queen Empress. The movements of British political history during the century that has just passed away appear to have been directed towards two distinct aims. The first of these is what may be called the completion of imperial dominion, and the second is the consolidation of imperial authority. The present attitude of British politics in China, the Boer war in South Africa, and the inauguration of the Australian Commonwealth are among the latest of the events which aptly illustrate this view. Signs are not, moreover, wanting to show that responsible British statesmen are becoming conscious that England's burden of empire is quite heavy enough, and that the coming generations of the citizens of the empire stand in need of much moral and political discipline to be able to bear that burden worthily, to the noblest advantage of the empire as a whole, and the common welfare of humanity at large. During the last few decades the empire has in all its parts manifested in an unmistakable way a great desire to be strong, to be united, and to be progressive; and it is in modern England's visibly active love of honest

strength, of loyal union, and of beneficent progress that we have the key to the dominant motive of British statecraft, as it was guided, controlled, and watched over by the late Sovereign Lady Victoria of blessed memory, Queen of Great Britain and Ireland and Empress of India.

The early self-contained continuity of the History of India has had more than one break in its natural course. After the subsidence of the internal social and religious ebullition due to the Buddhistic revolution in the centuries before the Christian era, India for the first time went out to the outside world with her great moral mission of teaching mankind the high value of dispassion and renunciation, as well as of impressing upon them in indelible characters the sweet reasonableness of the ever present duty of universal toleration and love. This advent of India beyond her borders naturally induced some of the peoples and the powers there to knock at her door in search of various advantages. Alexander found his way into the Panjab with his victorious army, and went back fully covered with the glory that he sought. Then there seems to have been for a short time a friendly interchange of ideas between the wisdom of ancient India and that of ancient Greece. The Scythians thereafter rushed into the peaceful and fruitful lands of the Indian Aryas in search of plunder and other allied advantages of unrestrained lawlessness. They gave rise to much panic and consternation in the hearts and homes of the Indian people; and yet in the course of two or three centuries the whole civilisation of India asserted itself against Scythian lawlessness. Buddhistic and pre-Buddhistic forces of religion and society subsequently combined together to evolve out of Indian society a new order of things and a new type of tolerant and progressive popular life. Then for a few centuries India was fairly free from external aggression, but this freedom unfortunately gave rise to internal political jealousies and discords. At such a time, when the much-needed new evolution of order and social solidarity was still

incomplete, the aggressiveness of Islam began to menace India on her north-western frontier. Soon enough Mahomedan fanaticism worked its way into the interior of the country, and all through the way of its march it rudely disturbed the peace and security of society. After a horrible exhibition of much cruelty and vandalism, the pushful and intolerant theocracy of Islam established itself at Delhi, and upset Indian independence. The Mahomedans, however, were wiser in their generation than the Scythians, who preceded them as the disturbers of Indian peace and progress. More successfully than the Scythians they organised their newly acquired political power in India, so as to raise it soon to the rank of an empire holding sway over the whole land. Before the Mahomedans could achieve this, Islam had to get rid of its iconoclastic fury, and had to become fair, tolerant, and enlightened by the wisdom that is born of impartial comparison and calm philosophy. It is the opposition of Hindu civilisation to Islam that so widened its vision and modified its temper in India. The Hindus not only managed to bring down the high temperature of Islamic fervour in so far as it told on them, but also showed themselves to be fully capable of regaining their lost political independence. We see the first concrete embodiment of the reaction of Hindu civilisation against Islam in the somewhat singular origination of the famous Kingdom of Vijayanagar at Hampi, in what now forms the Bellary District of the Madras Presidency. This Hindu kingdom was later on extinguished by the combined Mahomedan forces of the day. But Hindu reaction against the political supremacy of the Mahomedans in India still continued to assert itself, and Sivaji and the Mahrattas, whom he drilled into a formidable body of heroic patriots, really appeared on the crest of that same wave which was started by the great Vidyanarya at Hampi. The Mahrattas shattered the Mogul Empire into splinters, but could not carry into execution their cherished

ambition of founding a Hindu Empire with Delhi as its capital—an empire which, as they hoped, should be equal, if not superior, in extent and power and glory, to the one which they pulled down.

Once again the ambition of Hindu civilisation was to be spoiled just before the harvest time. Obviously the aim of Providence seems to have been larger than that of Hindu civilisation, and India, of ancient fame, had to be discovered unto the world as much as the world had to be discovered unto her. It was during the vicissitudes of the struggle between the ancient Hindu civilisation and the introduced Islamic power in India that Europe found out the oceanic way to her far-famed shores; and mercantile enterprise brought the nations of Western Europe into India to compete for that wealth which the Eastern Trade could give them so abundantly in those days. With greater or less success, they all shook the proverbial pagoda tree of India; and some among them endeavoured to take advantage of the then unsettled condition of Indian politics to establish, as far as possible, their own political power in the land. They sought Eastern Rule almost wholly with the object of compelling it to help on in various ways the profits of their Eastern Trade. When the Mogul Empire had been practically broken up, and the Mahrattas were finding the work of building up their hoped-for Hindu Empire much harder than they anticipated, European intervention in Indian politics brought the French to the foreground. The English too were on the alert and were awaiting their opportunity, which came to them soon enough and very propitiously. European competition for dominion in India probably prolonged, as some hold, the unsettled period of political rivalry and disorganisation in her history. It is said, not altogether without reason, that otherwise the Hindus and the Mahomedans would have quickly come to terms among themselves. Whatever this might have been, there is no doubt that

European intervention in Indian politics made it impossible for any internal power to become prominent enough to take in hand the work of reorganising and bringing together all the scattered political forces of the country. These European nations played their game of politics on the same board and with almost the same pieces as the Indian rulers and potentates used in those days. The forces and the sinews of war utilised for the purpose of acquiring as well as extending dominion were exactly the same and were derived from the same sources; only, the European part of the game was better designed and was generally executed with better and more unerring tactics. Thus it was that Indian interests could not combine together for their common consolidation. The motive for it was taken away, and the means became unduly divided. The result of all this was that the rivalry for political predominance in India gradually ceased to be a rivalry between Indian potentates; it ultimately turned out to be a rivalry between France and England. France lost the game soon enough on account of her naval weakness and unsteadiness of purpose, although she kept on playing it more or less ardently till the great battle of Waterloo. While the English East India Company was working to thwart the political aims of France in India, it also managed to bring gradually under control many of the ruling chiefs and princes of the country by means of various treaties of subsidiary alliance. The Nabob of Oudh and the Nizam of Hyderabad were among the earliest of the important Indian rulers who were so brought under control; and both of them sought the alliance of the Company mainly with the object of warding off the danger that threatened them from the Mahrattas. Accordingly, in India the struggle for political supremacy resolved itself mainly into a rivalry between the Mahrattas and the East India Company, as much as in Europe it had by this time become a rivalry between France and England.

As already remarked, France was in the year 1815 compelled to give up finally and for ever all her hopes of competing with England for the dominion of India; and only three years afterwards, in 1818, the power of the Peshwa in Poona was destroyed, and the Mahrattas had to give up in despair all their old imperial aspirations. Indeed, they had neither the strength nor the wisdom needed to achieve their ambition, in the peculiar concourse of the circumstances which came up in the days of their faith and endeavour. The very next year saw the birth of our late Queen-Empress Victoria; and at her birth the supremacy of British sovereignty in India was, as shown above, a fully realised fact. The so-called 'conquest' of India by the East India Company is a unique and unparalleled phenomenon in history, and it was accomplished wholly by means of Indian wealth and largely by means of Indian soldiery. The dominion so acquired by the Company had to be completed and made secure. The first work undertaken with this object in view was to force the frontier powers into a relation of friendliness with the British Government in India. Nepal had already been dealt with in this wise; then Burma was handled, and then Afghanistan. It was when this last power was being so dealt with that the now magnificently famous reign of our late Queen Empress began. At that time within the geographical boundaries of India, only Sind and the Panjab did not own fully the supremacy of her sovereignty. Being frontier territories within the limits of India, they could not be conveniently left in any uncertain state of allegiance. Therefore, they too had to be 'conquered' like all the other parts of India. The Mahomedan Amirs of Sind yielded up their dominion and independence more readily than the Sikhs of the Punjab, and in the whole history of British India there is no episode which is more stirring and more animated by true heroism than that which relates to the two Sikh wars. With the conquest of the Punjab, British dominion in India became

practically completed; and excepting the conquest and annexation of Upper Burma during the viceroyalty of Lord Dufferin, there has since been no large territorial addition to the British Indian Empire. As a matter of course, frontier states and principalities have had to be looked after all along; they have had to be coerced or conciliated as has been found necessary or expedient from time to time. To the eyes of the observant student of history and modern politics there appears no very probable prospect of any further expansion of the territorial area of the British Indian Empire. This Empire has now become fully four-square, and has all around it such boundaries as are strong and reliable both naturally and politically. Territorial expansion is even now advocated and urged by some persons, as, for instance, when we hear proposals made in a more or less irresponsible fashion regarding the conquest and annexation of Tibet. However, the vastness of the work needed to develop the internal resources of the Indian Empire and to improve its civilisation and prosperity is so astounding and awe-inspiring, that no responsible statesman at the helm of affairs in India can now with a light heart make up his mind to win glory in history by the comparatively easier process of unnecessary territorial acquisition. Thus the culmination of British expansion in India took place, we may well say, in the Victorian period of British Indian history.

In the history of all growing and expanding states we find that the work of conquest is uniformly easier and sooner done than the work of consolidating what has been conquered. The East India Company's 'conquest' of India has been almost ridiculously easy, owing to the operation of a number of specially favourable circumstances. To realise that it has been so easy we have only to compare the great strain which the conquest of the provinces put upon Rome with what the 'conquest' of India put upon England. It is a well ascertained fact of English history that

England's colonial enterprises in America, Australia, and Africa have cost her enormously in men and money; but India, the brightest jewel of the British Crown and the pivot of the great British Empire, came into her possession very much like a lucky gift of Providence. This easy 'conquest' of the whole of India by a trading company of British merchants is not certainly due to any deficiency in the resources of power and heroism in the country. The history of British India is in itself a loud protest against such a supposition. On the other hand the ease with which this 'conquest' was achieved is due to the fact that Indian resources were enlisted as much on the side of the British as against them. Indeed, in building up the Indian Empire the British have been more substantially helped than opposed by the people of India. But the intoxication of success is often found to be the more intense, the more easily the success is won. As a matter of fact, after the year 1818, a very decided change became distinctly noticeable in the moral aspect of the politics of the East India Company. In spite of the peaceful and exceptionally well-directed administration of Indian affairs during the Governor-Generalship of Bentinck, it is now evident that the East India Company lost its moral balance soon after it found its political power supreme in the land; and whatever the Company considered to be good and useful from its own standpoint, that it declared to be just and proper and soon carried into effect. The conciliatory and anxious attitude of the earlier days was replaced by one of dictatoriness, and even the good that the Company did lost all its graciousness by the air of superiority which its representatives vauntingly put on. This unwholesome state of affairs could not fail to attract attention in England; and as every page in English History is an illustration of the steady growth of the Englishman's political wisdom, discerning statesmanship in England read at once the wrongfulness of making the profits and other direct and indirect advantages of an incor-

porated trading company the proper and legally constituted end and aim of organised statecraft in India. The incompatibility between the commercial temper of trade and the necessarily altruistic functions of Government is too patent to escape attention: and five years before the coronation of our late Queen-Empress, that is in the year 1833, an Act of Parliament took away altogether the already reduced trading privileges of the East India Company. Even before this the British Parliament had interfered more than once with the Company's affairs, with the object of mending and patching up the parts of its Government of India; but this Act of 1833, which closed the commercial existence of the East India Company, is really the first serious attempt made by Parliament to place British politics in India on a just and strictly scientific basis. For this emendation of the error in the foundation of British Indian politics, India had to pay of course; and the constitutional recognition of the great though simple principle, that the essential function of the Company's Government of India was to look after the welfare of the people of India and to stimulate their progress and prosperity, was one that was at that time well worth purchasing even at a high cost. Even after this Act of 1833, much that was done by the East India Company in India appeared to the people of India to be characterised by high-handed selfishness and an offensive exhibition of the sense of superiority. To many observant Englishmen also, like the late Mr. Bright, the Indian work of the East India Company about this time does not seem to have given satisfaction. Mr. Rich, a then member of Parliament, went even so far as to speak of it in the House of Commons, in 1853, as *white power, black slavery*. Thus the Company had given room for much discontent in India; there was discontent among those whom the Company had deprived of their political power, among those on whom the Company's wars had inflicted impoverishment and bereavements, and also among those whom its governing work had not strengthened

and fostered with fairness. In addition to all this there arose the fear of religious intolerance, and the Government of the East India Company was suspected of having strong secret proclivities in the direction of Christian propagandism. To the Indians who, during a whole century, had so heartily helped the East India Company to the acquisition of its political mastery over India, the anxieties and the annoyances arising out of such a state of affairs became too much to bear, and the now notorious *greased cartridges* led to the explosion of the pent up discontent. Thus arose the Sepoy Mutiny of 1857.

It was fortunate that the explosion came so soon, thereby giving no time for the discontent to become deeper and more widely spread. The Mutiny was quelled, and the British Government in India came out of the crisis quite unhurt. Strange as it may appear, in this crisis also the sepoy fought on the side of the British and under British command, and rendered valuable service in upholding the British cause; and the people of India too showed themselves to be very largely on their side and strongly inclined in favour of order. It has been truly remarked that, if the Sepoy Mutiny had had the nature of a really popular rebellion against British dominion in India, the quelling of it would have been insurmountably hard. In every stage of the building up of the British Indian Empire, its Indian citizens have been faithful fellow-workers with the British people and their Government in India; and yet it seems as though the Mutiny was actually needed to abolish the East India Company and its mercantile administration of Indian politics. Surely no death has happened harder than the death of the East India Company, which indeed died very hard. An Act of Parliament, passed in 1858 after the Mutiny was quelled, accomplished the long delayed death of this inadequate and unsuited political institution, and placed India directly under the authority of the British Crown. In doing this, the Govern-

ment of England dealt with the Company very generously, and undertook to meet out of Indian revenue all its claims for pecuniary consideration. On account of the deprivation of its trading rights in 1833, the Company had become, by Act of Parliament, entitled to an annuity which was equivalent to the actual dividends and so came up to £ 630,000 per annum; and naturally this annuity was to be paid out of the territorial revenues of India. Moreover, it had been then enacted that this annuity was to be payable to the Company for a term of forty years, when it should be at the option of Parliament to redeem it, after three years' notice, at the rate of 100£. for every 5£. 5s. of annuity; and that the Company might, at the end of twenty years, if deprived of the power of governing India, demand payment of their capital at the same rate. In 1853, when the charter of the Company was renewed for the last time, the Company managed to retain its governing power in India, with somewhat greater restrictions and a fuller recognition of the rights of the Crown; and it was then arranged that £6,000,000 of India stock should have a dividend of *ten and a half per cent.* guaranteed by the Crown of England out of the revenues of India, and that Parliament might redeem this stock at cent per cent premium after 1873. The Parliamentary Act of 1858 also recognised and made provision for meeting these pecuniary claims of the East India Company; and another Act passed in 1873 led to the paying off of the India stock, in accordance with the above terms; and thus the East India Company became entirely an institution of the past. The company in its days enriched the English people in more ways than one; further by its 'conquest' of India for England achieved as above indicated, it raised the prestige and enhanced the power of the English nation so marvellously as to make them and their small island home an object of envy to all the civilised powers of the world.

The transfer of the Government of India from the East India Company to the British Crown

marks the real commencement of the consolidation of imperial authority in India. The authority of a state is said to be well consolidated only when all its subjects are seen to be ever willing and ready to obey it, and to sacrifice, whenever necessary, their own personal interests or even their lives for the purpose of upholding and maintaining that authority against all internal as well as external danger of disorganisation or destruction. From a survey of history and current practical politics we may easily make out that states have adopted and are adopting three different methods for securing such a consolidation of their authority. The first of these methods may be characterised as the method of coercion, the second as the method of justice, and the third as the method of love. To compel loyalty by a telling use of force is seen to be very necessary in certain crises in the history of states; but loyalty so derived becomes shaky very soon, and is in itself never worth having long. Therefore the coercive consolidation of authority, though sometimes necessary, is certainly not of the best kind; and even in the history of the mild and peace-loving people of India, there are numerous instances to show how this process is, in the very nature of things, doomed to end in failure, if not in catastrophe. When a state holds the balance evenly between its subjects and the wielders of its power, as also between one subject and another, in all the numerous details of its administrative work, so as to make the people feel that their government is scrupulously just and always well-meaning, then the authority of that state is sure to be more securely consolidated than when it rests on the exhibition or employment of force. Without enough might and physical force at its back, no state can live; but even the most despotic state glorying in a spirit of unrestrained militarism cannot afford to discard justice as a means well-suited to sustain and popularise its authority. The physical force of the sword is decidedly weaker than

the moral force of equity in upholding political authority and in justifying its use. But justice, which is not warmed by love, gives rise only to a kind of mechanical loyalty, leading the subjects to *acquiesce* at best in the authority of the state. Even an acquiescent loyalty like this is more precious than the mere fear of force, and political structures of a passably high order may with fair safety be built on such loyalty. Politics without love cannot inspire progress and cannot obtain the unstinted support of honourable patriotism. Love alone can give rise to the best harmony between the authority of the state and the liberty of the individual. Therefore, the consolidation of authority through love is more effective and more fruitful of good than that which is caused by mere justice. In the natural reciprocity and spontaneity of love there is a marvellous power of magic, which ever ennobles the state and hallows all its operations. Therefore, a government, which, having always a sufficient reserve of physical force to meet all possible emergencies, deals out even-handed justice in all its internal and external relations, and so loves the people that it governs as to be warmly and spontaneously loved by them in return,—that is the best, the surest, and the most effectively consolidated government.

I am not unaware that these general observations have a commonplace colour about them. But without their aid we cannot fully understand the advantages that have accrued to us from the abolition of the East India Company and the transfer of the government of India to the British Crown. In 1833 the British Parliament gave in no uncertain language its mandate to the East India Company to rule India justly and for the benefit of the people ruled. Mr. Charles Grant while speaking in Parliament about the Bill which finally abolished the Company's trading privileges, is reported to have remarked thus:—

“If one circumstance more than another could give him satisfaction, it was that the principle of this Bill had received the approbation of the House, and



that the House was now legislating for India and the people of India on the great and just principle that, in doing so, the interest of the people of India should be principally consulted, and that all other interests of wealth, of commerce, and of revenue, should be as nothing, compared with the paramount obligation, imposed upon the legislature, of promoting the welfare and prosperity of that great empire which Providence had placed in our hands." In these sentences we have no exaggeration of the virtuous character of the Bill, which gave constitutional sanction to the rule of justice and made it legally obligatory on the servants of the East India Company in their administration of the political affairs of India. In the discussions concerning this Bill many speakers in Parliament looked far ahead of their own days, predicting good or evil out of the provisions of the proposed enactment in accordance with their own convictions and temperament. Among them the most notable and statesmanlike upholder of justice and the most human and sanguine prophet of the good that justice, when courageously followed, yields, was the great lawyer, historian, and literary artist, Macaulay. The concluding paragraph of his earnestly eloquent and inspiring speech is well worth quoting in this connection, and it is as follows:—"The destinies of our Indian Empire are covered with thick darkness. It is difficult to form any conjecture as to the fate reserved for a state which resembles no other in history, and which forms by itself a separate class of political phenomena. The laws which regulate its growth and its decay are still unknown to us. It may be that the public mind of India may expand under our system till it has out-grown that system; that by good Government we may educate our subjects into a capacity for better government; that, having become instructed in European knowledge, they may, in some future age, demand European institutions. Whether such a day will ever come, I know not. But never will I attempt to avert or to retard it. Whenever it comes it will be

the proudest day in English history. To have found a great people sunk in the lowest depths of slavery and superstition, to have so ruled them as to have made them desirous and capable of all the privileges of citizens would indeed be a title to glory all our own. The sceptre may pass away from us. Unforeseen accidents may derange our most profound schemes of policy. Victory may be inconstant to our arms. But there are triumphs which are followed by no reverses. There is an empire exempt from all natural causes of decay. Those triumphs are the triumphs of reason over barbarism, that empire is the imperishable empire of our arts and our morals, of our literature and our law." With these golden words of wisdom and keen insight, Macaulay commended India to the care of the East India Company, and hoped that out of justice will arise the full fruition of Indian happiness and English glory. However, so far as the Company was concerned, all his wisdom and his fervid faith in the saving power of justice seem to have been merely thrown away. What individuals often learn from advice, institutions learn only from experience. Therefore even Macaulay's eloquence brought no immediate change in the political attitude of the Company in India, and the mandate of Parliament to rule India mainly for the good of the Indians was more honoured in the breach than in the observance. The 'interests of wealth, of commerce, and of revenue' continued to engage the attention of the Company more than the welfare and the improvement in the condition of the people of India.

Years before 1833 the Company had been led to recognise the duty of public instruction in India, and it had been decided, chiefly under the guidance of Macaulay, that Indian enlightenment was to be improved and increased by causing the spread of European knowledge in the country. The object of those who imposed this obligation upon the Company was not merely to see the masses of India made more enlightened and less superstitious than they

were ; they also aimed at enabling the worthier and the more intelligent among the Indian inhabitants to appraise aright the benefits of British rule and also to obtain their due share in all its privileges and responsibilities. Although British justice so sought to become luminous and exalted, the Company for a long time performed its duty of Indian education in a half-hearted manner and when, in 1853, the question of renewing again the charter of the Company was under consideration, more than one member of the British Parliament saw that the Company had been governing India in an unworthy 'spirit of monopoly and exclusion', and regretfully protested against the injustice and the impolicy of continuing to adopt such a course of selfishness and short-sightedness. The question of Indian education was, therefore, more seriously taken up in 1854, when the free, fearless and far-seeing policy of British Indian education received its inviolable imprimatur. And before much could be done in this way to rouse and reward Indian ambition along new lines and to reconcile the people of India to British rule by a full and noticeable exhibition of British justice, the Mutiny broke out ; but the tried wisdom of British statecraft soon converted even that into a source of incalculable good to India and the British Empire. The Mutiny showed beyond all doubt that the East India Company had been weighed in the balance and had been found wanting. Its failure was partly due to the imperfect machinery of its administration, and partly also to its old ineradicable love of pelf and monopoly. Till now all the improvements in the Government of India had been effected by the initiative of the British Parliament, and it now, more than ever, realised its responsibility before man and God for the peace as well as the progress of India. On the principle that whoever has the responsibility must also have the authority, the Parliament presided over by the British Sovereign at once assumed the direct charge of governing India and the many

millions of her people. In accordance with the Act of 1858 which brought about this transfer of authority, the Government of India became directly amenable to the House of Commons in England ; a Secretary of State subject to Parliamentary control was to be the responsible head in England of that department of British imperial administration which dealt with the affairs of India ; a body of expert advisers called the Council of India was organised to render help to the Secretary of State without any power to over-ride his decisions ; the knotty question of the *patronage of India*, which tried the skill of famous Parliamentarians like Pitt and Fox at one time, was now solved by the device of competitive examinations ; and it ceased to be legal to spend the Indian revenues on purposes unconnected with the administration of India, or to enter on wars and other military enterprises without sufficient need and justification for them. To fix well the fountain of authority, to organise responsibility, to encourage economy and financial justice, and to do away with nepotism and official monopoly may be seen to have been the chief aims of this Act of 1858 and to that extent, it has proved an instrument of political righteousness and wisdom for which India has had to be thankful.

All legal enactments have, in spite of their authoritativeness, the character of mere soulless abstractions, and are unsatisfying till they are seen to do good in their operation. Justice may be dealt out by means of them, but they are very inept instruments for the exercise of sympathy and love. Our late Queen-Empress took a great deal of interest in settling the terms of the Bill which, when passed into law, placed the Government of India under Her Majesty's direct control. "Some of the provisions of the new Bill were, with good reason" it is said, "criticised as designed rather with a view to Parliamentary support than in the interests of the better government of India. Such, for instance, was the proposal to vest the

election of one half of the eighteen members of Council in five of the great trading centres of England. To Her Majesty's objection to this proposal Lord Ellenborough replied that commercial interests ought to be adequately represented in the Council, and that any other method of securing commercial representation was not likely to find favour with the House of Commons. Lord Ellenborough's view, however, proved to be mistaken, for Mr. Bright and the Liberal party condemned the proposal, and Lord Derby was compelled to admit that the Queen's disapproval was endorsed by the general feeling of the country.\* There are now many Indian and some English publicists who are of opinion that the Secretary of State for India and his Council have allowed English commercial interests too often to injure the economic progress of India, and that the Council, being made up of retired Anglo-Indian officials, constantly tends to color the mind of the Secretary of State with all the prejudices and predilections of the privileged and protected Indian services. Her Majesty's objection to give a recognised position to English commerce in the constitution of the Council of India was worthy of her strong sense of justice and of her deep and widely comprehensive love; and through her influence, as well as through the well-known fairness of the British Parliament, political justice for India was finally saved from undergoing a sanctioned humiliation at the hands of legally constituted commerce. Her Majesty realised the responsibility of her sovereignty over India in a very remarkable manner; in the very act of taking charge of India, she filled the new constitution of the Government of that dependency with the shining spirit of her love. We know that the justice, sympathy, toleration, and mercy which so nobly characterise the Proclamation of 1858 really sprang out of the womanly kindness of Her Majesty's loving heart;† and Lord Curzon has not said anything more than the

\* The great personal interest and love, which Her Majesty, our late Queen Empress, showed, on the occasion she assumed the direct Government of India, in respect of

barest truth in declaring, as he did recently, that "all her reign and character are, in their relation to this country, summed up in the famous Proclamation of 1858, the *Magna Charta* of India, the golden guide to our conduct and aspirations." This Proclamation has been also spoken of as constituting the table of commandments to all those who have the privilege of exercising political authority in India, and it runs thus:—

"We hold ourselves bound to the natives of our Indian territories by the same obligations of duty which bind us to all our other subjects; and those obligations, by the blessing of Almighty God, we shall faithfully and conscientiously fulfil. Firmly relying ourselves on the truth of Christianity, and acknowledging with gratitude the solace of religion, we disclaim alike the right and the desire to impose our convictions on any of our subjects. We declare it to be our Royal will and pleasure that none be in anywise favoured, none molested or disquieted, by reason of their religious faith or observances, but that all shall alike enjoy the equal and impartial protection of the law; and we do strictly charge and enjoin all those who may be in authority under us, that they abstain from all interference with the religious belief or worship of any of our subjects, on pain of our highest displeasure. And it is our further will that, so far as may be, our subjects, of whatever race or creed, be freely and impartially admitted to offices in our service, the duties of which they may be qualified, by their education, ability, and integrity, duly to discharge. We know and respect the feelings of attachment with which the natives of India regard the lands inherited by them from their ancestors, and we desire to protect them in all rights connected therewith subject to the equitable demands of the State; and we will see that, generally, in framing and administering the law, due regard be paid to the ancient rights, usages and customs of India."

Such is our *Magna Charta*. It is a Proclamation unique in the history of the world. A Sovereign Lady who was the constitutional monarch of a free, powerful, and progressive people away in Europe proclaimed to the people of India, the

the welfare of the people of that country, is well brought by her following letter of command:—

*Babelsburg, 15th August, 1858.*

Her Gracious Majesty the Queen to Lord Derby.

The Queen has asked Lord Malnesbury to explain in detail to Lord Derby her objections to the draft of Proclamation for India. The Queen would be glad if Lord Derby would write it himself in his excellent language, bearing in mind that it is a female sovereign who speaks to more than hundred millions of Eastern people on assuming the direct Government over them, and after a bloody Civil War, giving them pledges which her future reign is to redeem, and explaining the principles of her Government. Such a document should breathe feelings of generosity, benevolence, and religious toleration, and point out the privileges which the Indians will receive in being placed on an equality with the subjects of the British Crown, and the prosperity following in the train of civilisation.

inhabitants of an ancient land with an ancient civilisation, at a time when they could least expect such a royal favour, that she loved them quite as well as she loved all her other subjects, and that she fully intended to make her sovereignty the means of bestowing on them a new life of progressive prosperity, a new civilisation, and a new citizenship of no mean order. It is in this magnanimous and strikingly beautiful manner that the era of love was heralded in the history of British Indian administration. The old era of stifled ambition and snubbed Indian aspirations—the era of unkindness and unfulfilled justice—was to be no more, according to Her Majesty's noble intentions; and what wonder that the Proclamation was received in India with great joy! "Yes, I was in Bombay," says Mr. Dadabhai Naoroji, "when this glad—my almost say divine—message was proclaimed here to a surging crowd. What rejoicings, what fireworks, illuminations, and the roar of cannon! What joy ran through the length and breadth of India, of a second and firm emancipation, of a new British political life, forgetting and forgiving all the past evil and hoping for a better future! What were the feelings of the people! How deep loyalty and faith in Britain was rekindled! It was said over and over again—Let this Proclamation be faithfully and conscientiously fulfilled, and England may rest secure and in strength upon the gratitude and contentment of the people, as the Proclamation had closed its last words of prayer." It then became evident at once to all thoughtful people in the country that the process of consolidating British authority in India by means of love had begun in right earnest, and that the frequently disturbed and disorganised civilisation of India might thereafter move on steadily and hopefully towards its appointed goal, being on the way strengthened by new light and new wisdom and supported by all the beneficent forces of a mighty modern empire. This policy of love which, while it fortified authority, planted the glorious liberty of British citizenship on Indian soil and under-

took to educate the Indian people to a full sense of their new privileges and responsibilities, was, for more than forty years, watched over by Her Majesty with tender care and the singularly supreme affection of a mighty mother of nations. Her Majesty's love flowed towards India incessantly and in abundance, and the policy of her Proclamation was confirmed by her and her Viceroy on all occasions when such a confirmation was found to be appropriately needed. When Her Majesty assumed the title of Empress of India in 1877, and also on the occasions when India celebrated with loyalty and joy the Golden and the Diamond Jubilees of her long and famous reign, the free and open expression of her love drew India closer and closer to the Throne of England. And now, to the princes and people of India, it cannot but be a source of gratification that His Majesty Edward VII, our present King-Emperor, has also given his sanction to that policy of equal justice and sustaining love which is so well enshrined in her Proclamation and our *Magna Charta*.

Some of us in this country are aware that a certain class of English lawyers have declared that, as an instrument of state administration, the Proclamation of our late Queen-Empress is a document without authority, that it is not at all binding in the way in which an Act of Parliament is. Their opinion may be right from the standpoint of the technicalities of law or perhaps it may not be so right as declared by Lord Ripon.\* Moreover

\* The following is the opinion of Lord Ripon on the authoritative character of the Proclamation of 1858:—

"The document is not a treaty, it is not a diplomatic instrument, it is a declaration of principles of Government which, if it is obligatory at all, is obligatory in respect to all to which it is addressed. The doctrine, therefore, to which Sir Fitzjames Stephen has given the sanction of his authority, I feel bound to repudiate to the utmost of my powers. It seems to me to be inconsistent with the character of my Sovereign and with the honor of my country; and if it were once to be received and acted upon by the Government of England, it would do more than anything else could possibly do to strike at the root of our power and to destroy our just influence; because that power and that influence rest upon the conviction of our good faith more than upon any other foundation, aye, more than upon the valour of our soldiers and the reputation of our arms."

there have also been British politicians to whom the principles of that Proclamation have appeared to be wholly impracticable, however much those principles may have the support of abstract justice. Such politicians do not obviously believe that the great glory of the work of politics consists in concretising into efficient human institutions those very principles of abstract justice which, in their short-sightedness, they all but ignore. To such of us as have studied history to better purpose than these politicians who do not know the aim of their calling, these opinions give rise to no fear. We know that justice is secure in the hands of history, and that neither subtle lawyers nor gloomy politicians can long prevent it from asserting itself. The wisdom of such people, whenever it has not been discarded in time, has only given rise to cataclysms in history. The Proclamation of our late Queen Empress contains all that is soon to be the decree of history in regard to the progress of India under the British Crown; and this belief of ours receives ample verification from the fact that even now the destinies of the British Indian Empire appear quite bright and attractive—no longer ‘covered with thick darkness’, as Macaulay thought in 1833. India has already learnt to esteem her place within the British Empire, and knows well enough that, within that Empire the knock at the door of justice and freedom is neither objected to nor disregarded too long. The public mind of India has already expanded, under the existing system of British rule, and is showing symptoms that it is outgrowing that system. Good Government has already educated the people of India into a capacity for better Government; and there are also visible signs that, having become instructed in European knowledge, they are demanding such institutions as will ratify their imperial citizenship. It is wrong to suppose that the new aspirations which are now declaring themselves everywhere in India are confined only to those who have had the benefit of English educa-

tion. The whole mass of Indian life has become leavened by the new ferment, the activity of which is manifesting itself in various ways, each of which is worthy in itself and well-fitted to advance the common good.

A study of India’s modern aspirations and of the various forms of her spontaneous public activity shows very clearly that her civilisation has entered upon a new career, impelling her people to strive for a higher and fuller corporate life than they ever had in the whole course of their past history of immense duration. There is no country in the world which has suffered so much as India on account of the division among its inhabitants and the consequently divided nature of their interests; and also there is no country which has suffered so much as India from numerous unnecessary restrictions imposed upon the liberty of the individual. British rule has given the Indians the golden opportunity to compare themselves with others and to see themselves as others see them. That such an opportunity has kindled in their hearts the desire for a larger union and a greater liberty is nothing strange or extraordinary. This kind of awakening is thoroughly natural, and the most encouraging aspect of it is that all patriotic and public-spirited men among the Indians have come to realise that neither the fuller union nor the greater measure of liberty which they seek, is possible of accomplishment without much more enlightenment and material prosperity among the masses of their countrymen. The vitality of the Indian people so stimulated during the latter part of the Victorian era has manifested itself in various popular movements mainly organised by the classes, both for their own improvement and for the amelioration of the masses. No historical and critical survey of India during the reign of our late Queen-Empress will be complete without taking cognisance of these popular movements. These movements are as varied in their character as they are widespread; and in every part of the British Indian

Empire there are associations organised by the people themselves, which endeavour to work out their progress in religious, social, political, industrial and educational matters. Even the old caste-organisations have been in many places roused into new life, so as to seek a stronger unity within and a better harmony without. There is the Indian National Congress associated with its many and scattered auxiliary institutions to illustrate the new popular political life of India and the chief aims which that largely self-evolved political life has in view. In addition to this, there are our religious conferences, social conferences, industrial conferences, and educational conferences. In religion the modern desire is not to accentuate differences, but to rely more on the common foundations and the common aims of creeds and cults; it is attempted to smooth over sectarian differences, to rely more upon purity and piety than upon formalism and rituals, to spread the spirit of toleration in favour of all ethical and universal religions, and to encourage liberty of conscience in all those directions in which it does not undermine social solidarity. In social matters also the endeavour is to procure greater freedom and establish greater justice in all the relations of life between individuals as well as between communities; and in seeking these the need for a larger union among the people for the development of an ampler social life is not forgotten. In educational matters the desire of modern India is to make science take the place of superstition, and to spread the enlightenment of European thought as largely as possible among the masses, with the help of a new and vigorous vernacular literature and of popular educational institutions of various kinds. Industrially also India wants more and more to take advantage of natural knowledge so as to be able to work up well all the varied resources of the wealth and to compete for that prosperity which commerce and enterprise alone can give. Judged by results these movements do not as yet

mean much, but their purpose proves convincingly that India knows where she is and whither she has to move.

At the same time that the Sepoy mutiny led to the inauguration of the policy of love in the conduct of Indian administration, it also sowed seeds of suspicion in the minds of most of those whose duty it has been to make that policy bear fruit in practice. The birth of such a suspicion is indeed more natural under the circumstances than the proffer of Parliamentary justice and royal love, although true statesmanship and the wisdom of prevision are to be found only in the latter. In connection with the Government of India by the British Crown it is possible to notice that the declared policy of the State is frequently enough contradicted by the performance of its administrators. This state of affairs is to some extent due to the suspicion engendered by the mutiny, that the people of India will never get themselves reconciled to the political authority of the British nation over them. Those who are not unwilling to see things as they are, will readily grant that this suspicion has already received enough of practical refutation. Nevertheless, it has to be borne in mind that the immediate object of the administrator is unlike that of the statesman, peace more than progress; and although the weariness of the administrator sometimes happens to be such as provokes impatience and other uneasy feelings among the people whose affairs he administers, still he cannot afford to be other than wary as long as it is his function to safeguard the State from all practical dangers. Unfair policy is as harmful to the State as incautious administration; and it is equally recognised on all hands that it is not impossible for the administrator to injure, by being too cautious, that which he is most anxious to conserve. The work of practical administration is therefore beset with many difficulties; nevertheless, the British Government has done much for us in organising the state and in settling the lines along which its beneficent

progress is to take place. No state can be supposed to be organised in which authority is not adequately centralised, responsibility is not well defined, and the sources of power are not integrated and improved. In India the centralisation of political authority has never been so successfully achieved as under British guidance and control. To have too many rulers is as bad for a country as to have none at all; and there is an Indian saying in Sanskrit, according to which what may be called polyarchy is as bad as anarchy. India has been saved from the anarchy of polyarchy, and we may well hope that this salvation is to be forever. In the matter of the definition of responsibility also, our Providential connection with the British Government has given us an advantage which we could not easily win for ourselves. Indian sovereignty has always been a constitutionally irresponsible one, its limitations being determined only by the goodness of the sovereign from time to time. As King of Great Britain and Ireland, the Emperor of India is a constitutional sovereign, and such was our late Queen-Empress also. The British people as a whole are, through their Sovereign and Parliament, responsible for the good government of India. It has been, however, pointed out by some that the Secretary of State for India is not effectively controlled by Parliament, and that the control of one people over the affairs of another cannot, however well-intentioned the controlling people may be, easily come to know the weak points in the administration and ascertain where and how grievances arise. Even somewhat clumsily arranged responsibility is better than irresponsibility and clumsiness in the definition of responsibility is bound to get corrected in time by the normal operations of the machinery of the state. In all the lower channels of authority, responsibility is neither indefinite nor overlapping; and although in regard to the definition of responsibility improvement is quite possible, we cannot help realising that we are not badly off and that the future

is full of promise. Lord Cross's enlargement of the Indian legislative councils indicates the direction in which that promise lies. And lastly the available power of India has been largely utilised by our Government for establishing its own stability as well as for maintaining order among the people. We further see that the moral resources of the country are being rapidly developed, and to-day the weight of loyalty and love of justice which the Government in this country has on its side is more than ever it was before. It has remarkably succeeded in creating both new light and new love, wherewith to get itself endeared to its subjects. In regard to the development of material prosperity, the Government has however to do much more than it has done hitherto; India must soon be made to grow richer than she is; otherwise she will not be worth ruling over, and all her future hopes will melt away into thin air. How far the state can and may help to start material progress in India is a question that deserves serious consideration; and the process of integrating and improving power both materially and morally is a never-ending process requiring constant watchfulness and steady stimulation.

This imperfect sketch of India under Victoria has become longer than I anticipated. I have not mentioned the railway and the telegraph, nor have I referred to the roads, bridges and canals and all other public works of great utility and advantage; our Schools and Colleges and Universities have not been touched upon; our Post offices, our Hospitals and the organisation of Medical aid to our men and women, the censuses, the survey, the statistics of trade the Courts and the Museums and all such other things as indicate in a concrete way the order and the progress achieved by the state in India have been left to speak for themselves. The freedom of our press and the freedom of our speech have been as little remarked upon as the notable fact that two Indian born citizens of the British Empire found their way into the British Parliament during the latter part of the Victorian era. The growth of our

cities and the inauguration of municipal self-government in them have also found no place in my account. The progress induced in Native States and the amicable relation maintained with them by the British Government have also been treated in the same manner. The work of modern Oriental research in giving India her proper place in the army of civilisation, and in drawing the attention of the world to all that is good in her literature and philosophy and religion, has also been left unnoticed. In briefly reviewing the Victorian era of British Indian history, my object has been neither to narrate events nor to survey statistics, but to explain the general trend of political forces as they have shaped India's present and are calculated to shape her future. The political goal of India and her way to it have both become clearly discernible; and in these days when the tendency of states to expand is so great that small states manage to live only by sufferance, our place in the British Empire is to us an invaluable source of strength and hopefulness. In an essay on *Roman Imperialism* Seeley says that 'Rome destroyed patriotism in its subject-races,' although the common allegiance to the same central authority made them all feel in a vague fashion that they were somehow allied to each other and contributed to the Majesty of the Empire. "Whether by its imposing grandeur, or the material happiness it bestowed, or the free career it offered, particularly to military merit, or the hopelessness of resistance, or—more particularly in the West—by the civilisation it brought with it; by some of these means or by some combination of them, the Roman Empire succeeded in giving an equivalent to those who had been deprived of everything by its unrelenting sword." This is the explanation that Seeley gives concerning how and why it was that the subject-races of the Roman Empire put up with the destruction of their patriotism. The American War of Independence taught the British Empire a lesson which the Roman Empire had neither the oppor-

tunity nor the capacity to learn; and that lesson is the lesson of organising representative self-government in the distant limbs of the Empire. Canadian patriotism does not now clash with Canada's imperial allegiance, and Australian patriotism did not prevent Australia from getting the constitution of its commonwealth ratified by the Imperial Parliament and the British Sovereign. In the British Empire provincial patriotism is not inconsistent with the exercise of imperial authority, and herein is to be found the superiority of this more modern Empire. The British Empire can and does generally give its subjects all that Rome gave her subjects; and unlike Rome, it need not destroy patriotism in any part of its extensive dominions. It has shown its capacity to so guide and control provincial patriotism as to derive strength and glory out of the moral power on which such patriotism rests. Of all the great Empires known to history, the British Empire alone has most successfully achieved the harmony of local autonomy with imperial centralisation.

Accordingly it is perfectly possible for India also to be warmed up by a patriotism that does not clash with the central authority of the Empire. More than one citizen of the British Indian Empire has illustrated such a possibility by means of his own life; and among them no one can be more illustrious than the late Mahadeva Govinda Ranade. Almost all that is good and worthy in modern Indian life found its full exemplification in him, and there are also other Indians whose ideal of life is in no way lower than his was. India's new political ideal installed brightly in the place of honor by the advent of British civilisation into the land, is in many respects grander than the great Akbar's dream, grander than all that Hindu civilisation in itself could ever have imagined. This ideal is no less than to fit India for the enjoyment of full individual liberty and for living that kind of complete and self-conscious corporate life,



which is well aware of all its capabilities and opportunities, and uses them so as to make us and the whole of humanity the richer for our having to play our part in the divine drama of the world's progress and civilisation. Therefore India's ancient inheritance from her hoary past has to be very considerably improved and added to year after year; otherwise it will be long before her new goal shall come within her sight. Victorian India has been an India of growing responsibilities to her administrators as well as to her citizens—an India of glowing ambition and worthy fulfilment of love and justice. To the virtuous reign of our late Queen Empress we owe in no small measure the great enhancement in the value of all that constitutes historic inheritance. How can it be right on the part of any one to betray this growing inheritance, or to blight it with evil deeds and aspirations? Can we afford to be so mean, or selfish or narrow as to forget, in the necessary clash of wills connected with the evolution of our government and our civilisation, that privilege and duty go hand in hand, and that power always implies corresponding responsibility? In our own day we are all guardians of the posterity that is to come; and, with the help of God, let us neither shirk our trust nor make it in any way less valuable as it is handed on to our children and children's children.

M. RANGACHAR.

"Now is an end of sorrowful loneliness!  
From her imperial purple, to the land  
Where all true-hearted kings with welcome stand  
Goes our great Queen—pure is her golden dress  
And in her hand a lily. Storm and stress  
The wide world o'er is hushed beneath the wand  
Of loss, the voices sound from strand to strand,  
Crying, 'we bless Victoria, and shall bless!  
For this was she who dwelt with God apart,  
Yet 'mid her millions sympathetic moved:  
This was the monarch—wise with gathered store  
Of kingly counsel, learned in duty's lore—  
The Queen whose more than sixty summers proved  
Her throne inviolate was a nation's heart."

CANON RAWNSLEY in the *Westminster Gazette*.

## VICTORIA.

May 24, 1819—January 22, 1901.

Dead! and the world feels widowed!

Can it be

That She who scarce but yesterday upheld  
The dome of Empire so the twain seemed one  
Whose goodness shone and radiated round  
The circle of her still expanding Rule,  
Whose Sceptre was self-sacrifice, whose Throne  
Only a loftier height from which to scan  
The purpose of her People, their desires,  
Thoughts, hopes, fears, needs, joys, sorrows,  
sadnesses.

Their strength in woe their comforter in woe—  
That this her mortal habitation should  
Lie cold and tenantless! Alas! Alas!  
Too often Life has to be taught by Death  
The meaning and the pricelessness of Love.  
Not understood till lost. But She—But She,  
Was loved as Monarch ne'er was loved before  
From girlhood unto womanhood and grew  
Fresh as the leaf and fragrant as the flower  
In grace and comeliness until the day  
O'happy nuptial glad maternity,  
More closely wedded to her People's heart  
By each fresh tie that knitted Her to Him  
Whose one sole thought was how She still might be  
Helpmate to England; England then scarce more,  
Or bounded by the name of British Realm,  
But by some native virtue broadening out  
Into an Empire wider than all names.  
Till like some thousand-years out-branching oak,  
Its mildness overshadowed half the globe  
With peaceful arms and hospitable leaves.

But there came to Her an hour,  
When nor Sceptre, Throne nor Power, nor  
Children's love nor nation's grief  
Brought oblivion or relief,  
When the Consort at her side,  
Worthiest mentor, wisest guide,  
Was by Heaven's divine decree  
From her days withdrawn and She,  
As dethroned by her distress,  
Veiled her widowed loneliness.  
And though longing still to hear  
Voice so revered and dear,  
All her People understood  
Sacredness of Widowhood.

Then when She came amongst them yet once more,  
She came in Autumn radiance, Summer gone,  
Leaf still on branch but fruit upon the bough,  
Fruit of long years and ripe experience,  
A shade of grave bereavement on her face,  
Withal more wise, more pitiful, tender more

To others' anguish and necessities  
 More loved more revered even than before ;  
 Till not alone the dwellers in Her Isle  
 But the adventurous manhood of its loins  
 In far-off seas and virgin Continents  
 They, won and wedded to domestic laws  
 And home's well-ordered household sanctities,  
 Hailed Her as Mother of the Motherland,  
 Queen Empress more than Empress or than Queen,  
 The Lady of the world on high enthroned,  
 By right divine of duties well-fulfilled,  
 To be the pattern to all Queens, all Kings,  
 All women and the consciences of men  
 Who look on duty as man's only right,  
 Nor yet alone those empowered to be  
 The subject of her Sceptre proud to pray,  
 "God save our Empress Queen Victoria!"  
 But those our kinsmen oversea that cling  
 With no less pride to Kingless government  
 Honoured and loved Her hailed Her Queen o'  
 Queens

Peerless among all women in the world,  
 And long and late this happy season wore  
 This mellow gracious Autumn of her days,  
 This sweet Indian Summer, till we grew  
 To deem it limitless and half forgot  
 Mortality's decree. And now there falls  
 A sudden sadness on our lives and we  
 Can only bow disconsolate heads and weep  
 And look out from our lonely hearths and see  
 The homeless drifting of the winter mist,  
 And here the *requiem* of the winter wind,  
 But from that Otherwhere man's Faith and Hope.  
 And mortal need for immortality  
 Invisibly conceive I seem to hear  
 A well-remembered voice august and mild.  
 Rebuking our despondency and thus  
 Bidding us face the Future as She faced  
 Anguish and loss, sorrows of life and death,  
 The tearful sadness at the heart of things.

'Dry your tears and cease to weep ;  
 Dead I am not, no, asleep  
 And asleep but to your seeing  
 Lifted to that land of Being  
 Living on life's other shore,  
 Wakeful now for evermore.  
 Looking thence I still will be  
 So that you forget not me  
 All that more than I was there,  
 Weighted with my Crown of care,  
 Over you I still will reign,  
 Still will comfort and sustain  
 Through all welfare through all ill.  
 You shall be my people still,  
 I have left you of my race  
 Sons of wisdom, wives of grace,

Who again have offspring reared,  
 To revere and be revered,  
 Those on Mighty Thrones and these  
 Doomed thereto when Heaven decrees.  
 Chief amongst them all is One,  
 Well you know my first-born Son,  
 Best and tenderest son to me,  
 Heir of my Authority.  
 He through all my lonelier years  
 Tempered with his smile my tears,  
 And was in my widowed want,  
 Comforter and confidant.  
 Therefore trustful, steadfast, brave,  
 Give him what to Me you gave,  
 Who am watching from Above  
 Reverence, Loyalty, and Love !  
 And these gifts He back will give  
 Long as He shall reign and live."

ALFRED AUSTIN.

#### PUBLIC LIBRARIES.

It has often been said, not without a semblance of truth, that there is no originality in the Indian mind. The meagre results of high University education for well-nigh fifty years are quoted in justification of the charge. The fact must be admitted, though not the explanation, that no original work of any high quality has been turned out by the alumni of our Indian Universities except perhaps in very recent years. Various explanations may be suggested which do not involve the admission of the sterility of the Indian mind. I do not propose in this paper to examine all the causes that have contributed towards a result which must be confessed to be somewhat humiliating to our sense of self-respect. One of the causes of the result we so much deplore may be found in the absence of Public Libraries to which not merely the uneducated and the half-educated may resort freely for self-education, but the educated may go for that mental equipment which is an essential condition of original research in any field of modern enquiry. Centuries ago, the merely disciplined human mind was a sufficient instrument of new investigation. All the available knowledge of the day in any department of science could well be compressed into a couple of volumes, the mastery of which qualified the aspirant for the honour of adding to the sum of human knowledge. But things have vastly changed within the last two or three centuries. Knowledge has accumulated with enormous rapidity and the student who would venture into unknown regions for exploration is

obliged to master a whole library before he can make a beginning. If there were well-stocked private libraries which students of literature or science could call their own, although there might necessarily be no abundance of them, you might here and there find a scholar or student of nature whom the commonwealth of letters or the brotherhood of science might not be ashamed to own. But the country is phenomenally poor, and the classes of people who are attracted by the new knowledge of our universities are not those that command leisure and whatever there is of wealth in this country. Nor is it possible for private libraries, where they exist, to cover all departments of knowledge to an adequate extent.

The need for public libraries is therefore great. Large associations of people might start such libraries. Municipal authorities might be specially empowered by legislation to devote a small fraction of their annual revenues, say, one pie in the Rupee, which would in the course of a few years accumulate to a sufficiently large sum equal to the founding and upkeep of public libraries. The newspaper and the free public library are among the great factors of modern popular education. We have no system of compulsory education as there is in Germany. And the genius of England is against compulsion whether in military service or popular education. Free Public Libraries are likely to create and foster a love of learning. All people are not qualified for a post-graduate university course. It seems therefore highly desirable whether for the spread of general education or for the keeping up of literary or scientific tastes in men who have received the benefit of higher education that free Public Libraries should be founded and maintained in large Municipal towns. Look again at the gross ignorance of the greater part of the educated section of the community in regard to the history and working of the various departments of Government. There is no place where the annual or other periodical reports of Government in all its departments of work or the reports of special commissioners appointed from time to time to investigate the working of Government in all its departmental activities or the reports and Parliamentary blue-books on the material and moral progress of the country in the past are made available to the educated citizen for the proper understanding of the various problems that press for solution all round.

The need for Free Public Libraries has long been recognized in the United Kingdom. By a series of Parliamentary statutes provision has been made for them in England, Scotland, and Ireland since 1850. The statutes now in force on the subject

are 55 and 56 Vic. Ch. 53\*, 56 Vic. Ch. 11 and the Local Government Act of 1894 in England, 50 and 51 Vic. Ch. 42, 57 and 58 Vic. Ch. 29 in Scotland, and the Public Libraries Act of 1855. and 57 and 58 Vic. Ch. 38 in Ireland.

By these various statutes provision has been made in all the three countries comprising the United Kingdom for the urban authority of each library district adopting the respective Acts for the particular locality, levying a rate not exceeding 1d. in the Pound upon the rental value of houses, and founding and maintaining free libraries of books and newspapers and museums and schools of Art. These or similar provisions may well be introduced in our District Municipalities Act making it optional with each Municipality to adopt the provisions by special resolution subject to the approval of Government if need be. It may of course be said that the large majority of the Municipal population is not likely to benefit by the provision. The same remark may be made of English or Irish boroughs though there a larger proportion of the population may reap the benefit of the institution. But it is not the true principle of legislation that it should benefit every member of the community directly. The legislation in respect of our Universities, the law with regard to companies and a host of other Acts of the legislature are not availed of by every citizen of the empire. But the progress of the empire consists in the progress of individuals, of classes and of communities, and even though they do not come under the direct influence of a piece of beneficent legislation yet they participate indirectly in the benefit of it, for each citizen intellectually and morally elevated becomes a centre of a beneficent influence that permeates all that come within its range. I hope and believe that our countrymen will take up the question of Free Public Libraries and persuade Government to introduce a few clauses in our Municipal Acts on the lines of English legislation on the subject.

V. KRISHNASAMI AIYAR.

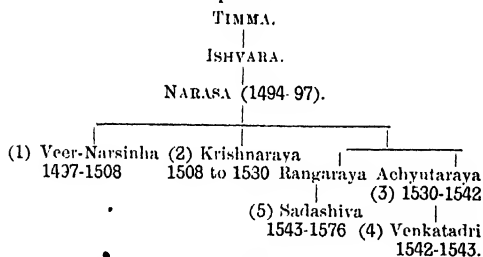
\* S. 2 (1) A rate or addition to a rate shall not be levied for the purposes of this Act for any one financial year in any library district to an amount exceeding one penny in the pound.

S. 11 (3) No charge shall be made for admission to a library or museum provided under this Act for any library district, or in the case of a lending library, for the use thereof by the inhabitants of the district; but the library authority, if they think fit, may grant the use of a lending library to persons not being inhabitants of the district, either gratuitously or for payment.

Continued.

## SECOND DYNASTY.

The following geneology of this dynasty is ascertained from inscriptions: -



The Portuguese raided the coast and obtained some concessions from the local chiefs of Honavar and Bhatkal who were subordinates of Vijayanagar. In 1503 the Portuguese attacked the port of Honavar and burnt it. They then went to Bhatkal which was then a great centre of trade, and

About this time, Italian traveller Varthema, visited Kanara and Vijayanagar. He gives an interesting account of the kingdom of the "Narsing" as the Portuguese used to call the Vijayanagar Empire. He found that the local chiefs in Kanara were subordinate to Narsinha. The port towns were well-built and prosperous in trade. Provisions were plentiful everywhere. He took 15 days to reach Vijayanagar from Kananur. His description of the city tallies with that of Abdulrazak. The king Narsinha was the richest king Varthema heard of. Narsinha's revenue was estimated at £ 15,00,000 a year. He had 40,000 horsemen, 400 elephants and some dromedaries. The horses were very valuable. He was a great friend of the Portuguese who honored him. He was so rich that the ornaments of the horse he rode out his retinue consisted of several kings, nobles, and 5000 horses. Travelling was everywhere safe, except in some places wild animals gave trouble. King Narsinha's minister was one Timma. The kings of this line appear to be the worshippers of Vishnu.

The greatest of the Vijayanagar Emperors, was the younger step-brother of Vir-Narsinh. His

mother's name is Nagala-Devi. There is abundant evidence of numerous inscriptions to disprove the tradition that he was the illegitimate son of Narsa and that he usurped the throne setting aside the claims of Vir-Narsinh. There is clear evidence to show that he succeeded his brother Vir-Narsinh after the latter's death.

Krishnaraya's memory is fondly cherished even now in Karnatic. During his reign of 22 years Karnatic had seen its halcyon days under its own ruler. South India never had witnessed such an extensive and compact Empire enjoying peace and prosperity and governed by an enlightened Hindu Prince. He was an ideal Hindu king in every way. He was successful in his wars against the Mussalmans, he extended the limits of his empire, introduced a model revenue system, encouraged agriculture and trade, patronized Sanskrit and the vernacular literature, besought the company of the learned men of whatever sect, constructed tanks and canals, built magnificent temples, endowed religious institutions and indulged in unlimited charities. His court was magnificent, and skilled men and artists from all parts of India flocked there. His gold coins are even now worn as Talismans. In this sketch it is not possible to give at length the history of Krishnaraya.

During this reign Goa was taken by the Portuguese from Eusuf Adilshah in 1510 A. D. Krishnaraya encouraged this conquest and his underlord Timmaya of Honaver took active part in assisting the Portuguese. Goa was however retaken by Adilshah and therefore Krishnaraya prolonged the negotiations of a treaty with the Portuguese which he concluded after Goa was again captured by them. By this treaty he allowed them to build a warehouse at Bhatkal for which the Portuguese agreed to send all Arab and Persian horses landed at Goa, to Vijayanagar and not to Bijapur. He further agreed to be friendly with the Portuguese and to wage a war against the king of Bijapur. Krishnaraya engaged a number of Portuguese to command his artillery.

Eusuf Adilshah died about 1510 and was succeeded by Ismail Adilshah. In 1512 Krishnaraya took the forts of Raichore and Mudgal from Bijapur. In 1520 Ismail attempted to take back these but was completely defeated by Krishnaraya. In this war, according to a Portuguese writer, Krishnaraya had with him 35,000 horse, half a million foot, 586 elephants, 12,000 water-carriers and 20,000 dancing girls. After this Bijapur did not attempt any war with him. In all his successes and administration, Krishnaraya was assisted by his brothers Achyutaraya and Rangaraya and by his great minister Timmaraya (or Appaji) and his brother Govindraya.

The chief of Umattur in Mysore rebelled and Krishnaraya personally took field against him and reduced the forts Shrirangpattam and Shivasamudra. He then went to Coorg and had planned a march against Malabar; but the chiefs of Malabar made friendly alliance with him. He then went to the Tamil country and completed the conquest of the Pandyan Princes and appointed his own Viceroy at Madura. He caused to be built the forts of Jinji, Velur, and Chundragiri. After establishing his rule firmly in the Tamil country he turned his attention to Telangana and subdued the chief of Udayagiri (in Nellore District). He then proceeded to conquer the Gajapati Raja of Orissa. He conquered the whole of the country now included in districts of Krishna and Godavari. He had also conquered a great part of Telengana now included in the dominions of the Nizam, but these last conquests did not remain long in his possession, as Kutubshah, the founder of the kingdom of Golkonda took them back from him. The king Prataparudra of Orissa gave his daughter in marriage to Krishnaraya and made peace with him. This alliance forms the subject of a romantic poem in Telugu.

Krishnaraya took personal interest in the administration of the kingdom, in which he always kept moving. At his court there were eight great Telugu poets, including the famous court-jester

Tennalu Ramkrishna, whose wits are even now current in Karnatic; there were also Sanskrit and Kanarese poets and scholars at his court, such as Appaya Dikshit, Timmana, Kumar-tyas, Bhattamurti and others. He has himself composed a poem in Telugu and it is said that his daughter Mohanangi was also a poetess. Vallabhaacharya, the founder of a Vaishnav sect, received orders at Vijayanagar and Krishnaraya gave him much wealth. Even Jain Pandits were entertained at his court.

Krishnaraya improved or repaired many temples and built the temple of Krishna in Krishnapuram at Vijayanagar, now in ruins. The most beautiful of all the Vijayanagar temples, the temple of Vijaya Vithal in which the combined Chalukyan and Dravidian styles of architecture are found in perfection, was begun in this reign. He dammed the Tungabhadra and brought a large canal into the city of Vijayanagar. His minister Mudd also cut seven other canals from the same river. The great tank of Magad Masur between the borders of Dharwar and Mysore and the one at Shiggaon were constructed in this reign. He built many towns, some of which are now important places in Karnatic, such as Hubli, Bangalore, Bellary, Chik-Balapur and others. He is said to have built many forts also. He introduced a revenue system which was like the present rayatwary system, where individual holdings were measured and rent fixed according to the quality and area. Correct land records were kept in each village and some such records were found by Munroe in Kanara. The rates of assessments were very moderate until they were enhanced by the Mussalman rulers. Assessment was taken either in cash or kind. The Revenue Survey of Krishnaraya became the basis of all subsequent Survey settlements in Mysore, Kanara and Karnatak. The kings of Vijayanagar advanced tillage, made money advances to rayats and encouraged people to occupy waste lands, to improve gardening and establish townships. This king also encouraged trade and commerce.

The Portuguese traveller.—Barbosa visited this empire about A. D. 1514. He saw the Canara coast and the inland country. Space does not permit lengthy quotations from his interesting account. He found that the Tuluva-nad (Canara District) contained many rivers and seaports with much trade and shipping and many rich merchants. Even the hilly parts of inland had many good villages. The upland plain was fertile and abundantly supplied with many cities, villages and forts. Rice and many other crops were grown and there were plenty of domestic animals. His description of Vijayanagar, of the king and his court is grand. The city was thickly populated and men from all nations were to be seen there. There were many rich Hindu and Mussalman traders. All religions had free play. This city was the chief mart of precious stones in India which came from Burma, Ceylon, and local mines. Pearls came from Hormuz and Cael. Chinese silk and dyed stuff from Alexandria and Europe were brought in large quantities. The people were rich and wore jeweller on their person. The king ruled the country through his Dand-Naiks or Governors who administered strict justice.

The eastern coast was also under this king and possessed many sea-ports, where ships from China, Pegu, Ceylon, Arabia, Malbar and from Sumatra and Java flocked in large numbers. The merchants called 'shettis' were very rich. The historian Ferishta does not even mention this great king, but another Bijapur historian says that Krishnaraya was a wise and just ruler. He protected such Mussalmans as found shelter in his kingdom and they too fought bravely for him.

Krishnaraya died in 1530 A. D. He had no male issue and one of his daughters was married to Ramaraya, who was a great officer and chief under Krishnaraya.

ACHYUTARAYA—(1530—1542 A. D.).

Krishnaraya was succeeded by his younger step-brother Achyutaraya, who is said to have ruled with Krishnaraya. Rangaraya and Achyutaraya were Narasa's sons by his wife Ombambika.

Many public works and temples were constructed during this reign. Ismail Adhilshah and Kasim Berid led their combined forces against Raichore and Mudgal and recovered those places from Vijayanagar. In 1534, we find Vijayanagar assisting the forces of Bhijapur against Kutub Shah of Golkonda. This is the first occasion when Vijayanagar mixed itself in the mutual struggle of these newly established Mahomedan kingdoms, a step which ultimately resulted in the ruin of this great empire. Achyutaraya extended his authority as far as Tinnevely, the farthest corner of South India. He had a minor son named Venkat who succeeded him.

VENKATADRI—(1542-43 A. D.)

This king being only a child, the whole administration was in the hands of Shalak Timmaraya. The Bijapur historian, Shiraji, writes that Krishnaraya's son (should be Achutaraya's, whose name is omitted by Mahomedan writers) was only an infant. The minister Hos Tirumalraya carried on the administration. He dismissed many old officers and brought in his own relations and favourites. He became highly unpopular, and respectable nobles retired from the capital. Ibrahim Adilshah, the successor of Ismail, took advantage of this and invaded Vijayanagar. Hos Tirumalraya bought him off by paying 80 lacs of Hons. Tirumalroya's rule became oppressive and a good deal of anarchy prevailed. The young king soon died and it is said that Hos Tirumalraya murdered him and began to rule himself. The old noblemen of the kingdom headed by Ramaraya, the son-in-law of Krishnaraya, combined against him, when Hos Tirumal became furious and sought the aid of Ibrahim Adilshah, promising to pay the latter 3 lacs of Hons each day of his march. The King of Bijapur triumphantly entered Vijayanagar and returned on receipt of 50 lacs of Hons. This action exasperated the Lords of Vijayanagar who surrounded Hos Tirumalraya in the palace. Hos Tirumalraya seeing escape impossible wantonly destroyed valuable property in the palace and finally committed

suicide. Thus ended the period of anarchy in Vijayanagar which according to chronicles lasted for 9 months. Inscriptions confirm that Venkat died soon after his accession. As the throne was vacant Ramaraya raised to it Sadashivraya, son of Rangaraya.

SADASHIVRAYA—(1543—1576 A. D.)

This being also an infant king, Ramaraya carried on the administration in his name till the fall of Vijayanagar in 1565. Inscriptions of Sadashivraya are found for some years later till 1576 A. D., when probably, he died at Penugonda in obscurity. During the whole period from 1542 to 1565 A. D., Ramaraya was the real Emperor of Vijayanagar, though he never assumed that title.

RAMARAJA—THE PROTECTOR (1542 to 1565 A. D.)

•Ramaraja claimed his descent from Bijjal (1167 A. D.) king of the Chalukyas of Kalyani, who was murdered by Basav, the founder of the Lingayat sect. Ramaraja's ancestors, who styled themselves Narapatris, held some Jaghir in the Kurnool District and he himself served under Kutub Shah of Golkonda. He lost a battle with the Bijapur kings and incurred the displeasure of Kutub. He then entered into the service of Krishnaraya who gave him his daughter in marriage and also a military command. He got also the fort of Adoni as a marriage gift. When Hos Tirumalraya was fighting with the nobles of Vijayanagar, the great Bijapur General, Asadkhan, had invested Adoni which was ably defended by Venkatadri, younger brother of Ramaraja. Shiraji, a Bijapur historian, thus describes the position of Ramaraja at this time.

"Ramaraja conducted the administration in the name of Krishnaraya's son, (should be 'nephew'). The young prince was shown to the people in the court. During the first two years of his administration Ramaraja gradually filled all offices of state by his relatives and supporters. His brother Tirumalraya managed the civil administration while Venkatadri was the commander-in-chief. When his power became firmly secure Ramaraja con-

fined the young prince in the palace and himself administered the country for 23 years in great prosperity. He completed the great canal in Vijayanagar which was begun by Krishnaraya. Some refractory Mussalman nobles from the neighbouring Mahomedan kingdoms had taken asylum with him and he treated them kindly. A special part of the imperial city was assigned to the residence of Mussalman population and it was called *Turki Mohala*. The Mussalmans built musjids and even killed animals for their food. Ramaraja and his brothers and nobles built rich palaces and temples in the city which had about 70 canals to supply water. The nobles planted gardens where several kinds of fruit were grown. Ramaraja was a noble and wise ruler. His prosperity continued till he was defeated by the combined forces of the Mahomedan kings."

Like his predecessors he encouraged arts and literature. The Naiks of Madura famous for their grand buildings in South India were his viceroys. As there was scarcely any trouble in the empire, he sought an opportunity to recover the forts of Raichore and Mudgal from Bijapur, and such an opportunity was easily found in the quarrels of the Mussalman kings of the Deccan. To understand fully the various and ever-changing coalitions formed by him during the next 20 years, a brief study of the political condition of the Deccan would be necessary; but it is out of place here. It is enough for our limited purpose to know that when he assumed the administration of Vijayanagar, Bijapur was ruled by Ibrahim Adilshah with the assistance of his famous General, Asadkhan of Belgaum. Burhan Nizamshah ruled Ahmednagar and Kutub Shah continued to rule Golkonda. Beridshah, kingdom of Bedar was practically conquered by Bijapur, though Amir Berid and his son, Ali, tried to be free. This kingdom was very small and became a prey to the bordering kings of Bijapur, Ahmadnagar and Golkonda.

After Krishnaraya's death Kutub Shah reconquered some places from Vijayanagar and Rama-

raja was waiting for an occasion to recover the same, but in the meantime a war broke out between Burhan Nizamshah and Ibrahim Adilshah. Burhan was assisted by Kutub of Golkonda and Ramaraja, and the latter invaded Bajapur. In this war Kutub Shah received a fatal wound and was succeeded by Jamsid. But this succession was opposed by his brother Ibrahim who rebelled, but being unsuccessful retired to Vijayanagar where he was well received and protected by Ramaraja. The war with Bijapur soon ended as Ramaraja was bought off by Asadkhan.

In 1557 Ramaraja entered into a treaty with the Portuguese Viceroy, Dom-Joao da-Castro, by which the Portuguese agreed to send Persian and Arab horses to Vijayanagar and not to Bijapur. It was also agreed that Vijayanagar was to divert all grain going from Bankapur and Dharwar to Banda, to the Portuguese fortresses of Honaver and Ankola; that all country cloth was to be sent to the Portuguese factors where it was to be exchanged with copper, tin, coral, vermillion, mercury, silk from China and Ormuz brought by the Portuguese; that a war be declared against Bijapur by both the parties and Mussalman ships trading on Vijayanagar coast should be captured and made over to the Portuguese; and that lands lying between the sea and the Sahyadris and between Banda and Chitkul, if conquered from the enemy, should be given to the Portuguese and the rest to Vijayanagar. About 1550 Jamsid Kutub died and was succeeded by Subhankuli, but the nobles rebelled and asked Ibrahim Kutub, who was at Vijayanagar with Ramaraja to occupy Golkonda. Ramaraja assisted Ibrahim in this enterprise and escorted him to Golkonda where Ibrahim was soon installed as king. At this time Asadkhan was dead and Ramaraja encouraged Burhan Nizamshah to invade Bijapur from the north. He took Sholapur and Peranda while Ramaraja recovered Raichore and Mudgal. In 1553 war again broke out with Bijapur and Burhan Nizamshah and Ramaraja invaded that country. Burhan died at Bijapur which



he had besieged and was succeeded by Hussen Nizamshah. After this Ramaraja became friend of Bijapur and fought against Ahmednagar. Ibrahim Adilshah made friendship with Ramaraja and with his assistance wanted to recover back Sholapur. A war broke out in which Hussen Nizam's General, Syfun Mulk had joined Ibrahim. But no sooner war was begun with Ahmednagar than this traitor General turned against Ibrahim and would have taken Bijapur if it were not saved by the timely assistance of Venkatadri, brother of Ramaraja, who defeated Syfun Mulk. Ibrahim Adilshah died in 1557 A. D. and was succeeded by Ali Adilshah whose first act was to secure the friendship of Ramaraja. He sent Kishver Khan to Vijayanagar on this errand. Soon After Ali Adilshah himself went to Vijayanagar to see Ramaraja who gave him a grand reception. He agreed to assist Ali against Hussen Nizamshah, who hearing of this alliance sought the aid of Ibrahim Kutubshah. Ramaraja however wrote to the latter and reminded him of the past obligations. Ibrahim Kutub therefore joined Bijapur and the armies of the three kings combined at Kulbarga before invading Ahmednagar. The combined forces consisted of 9,00,000 of infantry and 1,00,000 cavalry. They laid seige to the fort of Ahmednagar when Hussen Nizamshah fled to Paitan. Ibrahim Kutubshah however privately assisted the enemy, while Ramaraja and Ali devastated the country all round. But Ibrahim tried to induce Ramaraja to give up further operations and even offered Kundapilly District to him as a bribe but Ramaraja did not yield. Ibrahim then withdrew his forces and the war was concluded by Hussenshah who made a treaty with Ramaraja and Ali. Hussen agreed to restore Kalyani to Bijapur and to accept the supremacy of Ramaraja. Hussen Nizamshah did not remain quiet after this humiliating treaty. He wanted to retaliate and with that object strengthened the fort of Ahmednagar and secured the alliance of Ibrahim Kutubshah by giving him his daughter in marriage. War again broke out in 1563, when Hussen and

Ibrahim laid seige to the fort of Kalyani. Ramaraja did not like the interference of Ibrahim Kutub in his war and sent a great army against Golkonda and himself joined the forces of Bijapur. Hussen and Ibrahim were both defeated near Kalyani and the combined army of Bijapur and Vijayanagar entered the Ahmednagar territory. The fort of Ahmednagar was invested as before, when Hussen Nizam shah fled to Junner; and was followed there by Ramaraja. Hussen thereupon went into the hills and Ramaraja returned to Ahmednagar. While encamped there, during the sudden floods of the Secna, he lost thousands of men and large quantity of stores. Then he returned to the south. He wanted to take possession of Sholapur but Ali Adilshah gave up the idea, fearing that Ramaraja would retain the place for himself. On their way back Ramaraja's army gave much trouble to the Mussalmans. As a price of his assistance, Ali agreed to cede Bagalkot and Yatgiri to Ramaraja. While Ramaraja was at Ahmednagar his brother Venkatadri was devastating the Golkonda kingdom and his son-in-law Timraj went against Devakonda. Finally Ibrahim Kutubshah ceded Guntur, Ghanpura and Pangul to Ramaraja and put an end to this war. Thus at this time Ramaraja became the greatest monarch of the Deccan and a dictator to the Mussalman kings. His ambition however led him to excesses and the Mahomedan kings learnt that their first act for their mutual benefit was to crush him. His conduct had alienated from him not only Ibrahim Kutub but even Ali Adilshah. Hussen Nizamshah was a skilful statesman and he took advantage of this feeling against Ramaraja and induced the kings of Bedar, Golkonda and Bijapur to join him against Vijayanagar. To make this alliance more secure he gave his daughter Chandbihi, who became famous in history afterwards, in marriage to Ali Adilshah and restored Sholapur to Bijapur. Ali also married his sister to the son of Hussenshah. Thus Hussenshah made a family compact with Golkonda and Bijapur against their common enemy Ramaraja,

who had then reached the zenith of his power and arrogance. But for this combination it was not possible to subdue this most powerful person. His army was great and his resources were almost unlimited. If Ramaraja had waited for a time and had not opposed personally the combined armies with his full strength, the combination would not have lasted long. The mutual jealousies of these Mussalman kings were so bitter that even marriage alliances would only have a temporary effect. But Ramaraja either through his pride or through grave political error, faced the combined forces on the south bank of the river Krishna, near the village of Dhanur. The battle is famous in history as the battle of Talikot, which was the last camp of the armies of the allies. Ramaraja brought his whole army to meet the Mussalmans, of which one division was commanded by Venkatadri, another by Tirumalraya and the third by himself. His forces are variously estimated. Ferishta says that Ramaraja had 9 lacs of infantry, 60,000 horses, 2,000 elephants and 1,000 guns. This famous and decisive battle which resulted in the destruction of the prosperous kingdom of Vijayanagar was fought on 25th of January 1565. As usual the Hindus were successful at first, but Ramaraja who was sitting on a raised throne being wounded and captured, his army lost heart and began to leave the field in great confusion. The Mahomedans easily defeated and massacred the confused mob. Ramaraja was at once beheaded and his head was carried in triumph to Ahmednagar. It is said that he was then 96 years old. If Ramaraja had acted with his usual tact and prudence he would have saved the last great Hindu kingdom of South India, but his rashness probably brought on by dotage can only be compared to that of Sadashivrao Bhau at the battle of Paniput in 1761 A. D.

Ramaraja was the great ruler of Vijayanagar. Like his predecessors he encouraged arts and literature and built temples and tanks. He was brave, skilled in warfare and successful in diplomacy. For a quarter of a century his power was felt

throughout Southern India. He had personally fought many battles since the time of Krishnaraya and was considered to be an excellent archer. The great temple of Hajari Ramaswami in Hampi was built by him. It is adorned with bass reliefs showing the submission of Mahomedan kings.

After the great battle of Talikot the Hindu army dispersed and Venkatadri and Tirumalraya retired from Vijayanagar to Penugonda, in the Anantapur District. The allied forces soon reached Vijayanagar, but the citizens had already removed the bulk of wealth from the place. 1550 elephant loads of treasury including the jewelled throne was thus carried away before the Mussalmans had reached the place. They however still found plenty of wealth. The Mussalmans burnt the city, destroyed temples and palaces, broke idols, and disfigured buildings. Their acts of vandalism can be traced even to-day amongst the ruins of Vijayanagar. The city became a ruin and such of the inhabitants as still remained there, took to the surrounding hills.

The three Mussalman kings spent six months in Vijayanagar and not coming to any definite agreement as to the partition of the conquered kingdom they retired northward. Tirumalraya brother of Ramaraja who started a new dynasty at Penugonda made a secret treaty with Ali Adilshah offering him Badami, Torgal and Mudgal. Husen Nizam Shah retired to Ahmednagar and soon died. In 1567 Tirumalraya returned to Vijayanagar and tried to repopulate the city but he failed. Ceasar Frederick, a Venetian merchant who visited Vijayanagar in 1567, thus describes it.

"Vijayanagar though empty was not destroyed. The houses were standing but in parts of the city there was nothing but tigers and wild beasts. Most of the houses were plain with mud walls but the temples and palaces were of lime and fine marble. Of all the kings' courts he had seen, the Vijayanagar palace was the finest. There were five great outer and four small inner gates, the palace was well-guarded and the city safe from thieves."

In 1566 Ali Adilshah sent an army against

Penugonda, but Venkatadri made a treaty with Ahmednagar and Golkonda, who invaded Bijapur from the north and thus forced Kishverkhan to retire. In 1568 Ali Adilshah took the fort of Adoni from the nephew of Ramaraja and in 1573 took Badami and Torgal. Dharwar was taken in 1574 and after a siege of one year, the strong fort of Bankapur was conquered. Thus the whole of the south Deccan was conquered by Bijapur but beyond the river Tungbhadra, Tirumalraya still held his sway. The fate of the last Emperor Sadashivraya is unknown, probably he was killed by Shri Rang, son of Tirumalraya as stated by Frederick.

The history of Vijayanagar practically closes with Sadashivraya, though the kings of the new line established by Tirumalraya, continued to call themselves 'kings of Vijayanagar.' They had almost lost their hold on the western coast and north Mysore, where the local chiefs assumed independence. Shrirang ruled from 1573-1585. In 1579 Ali Adilshah invaded his country and besieged Penugonda. The king retired to Chandragiri. Ali however retired without taking Penugoda and was murdered at Bijapur in 1580. Shrirang died in 1585 and was succeeded by his brother Venkatapati who ruled from 1585 to 1614. He was a powerful king and established his authority over the refractory and rebellious Naiks of Jinji, Tanjore, Chennapatan, Madura and Shrirangpattan. He maintained a respectable court at Chandragiri and attempted to recover the country south of the Krishna from Mohrulkuli Kutubshah, the successor of Ibrahim Kutubshah.

This war was successfully carried on by Venkatapati from 1593-1599. His power was great below the Eastern Ghats and in the Tamil country. After his death five kings ruled between 1614 to 1636 A. D. In 1636, Venkatapati was the king of Vijayanagar. This king granted in 1639 to the East India Company, the site of the Fort St. George. He was succeeded by Shrirang, the last of the kings of Chandragiri. His kingdom was taken from him by Shahaji Bhosale, the father of

Shivaji and a great general of Bijapur. Thus when the last vestiges of the kings of Vijayanagar were disappearing, seeds of new empires were being planted by Shivaji and the East India Company. Shiraji says that soon after the fall of Vijayanagar AliAdilshah had granted the Jhagir of Anagund a suburb of Vijayanagar, to the son of Ramaraja, whose descendants enjoyed a respectable income till lately. The line still exists and the last scion of the great house of Vijayanagar still enjoys the revenue of a few villages in the Nizam's dominions and maintains the departed dignity and the name of an Emperor. He owned Hospet and Bellary which were taken by the British Government from his family in consideration of a pension conferred on him, but a technical flaw in the adoption of the present Raja, deprived him of that poor pittance and he is spending his days in penury.

V. R. NATU.

### Shakespeare's King Lear and Indian Politics.

BY

WILLIAM MILLER, C. I. E., D. D., LL. D.,

*Principal of the Madras Christian College,  
Member of the Madras Legislative Council, and  
Fellow of the University of Madras.*

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#### EXTRACTS FROM THE PREFACE.

THIS is not an annotated edition of a play. It is a serious study of what is probably the greatest of Shakespeare's work. It is an attempt to make the wisdom which *King Lear* admittedly contains available for practical guidance in not a few of the difficulties that beset individual and especially social life.

I hope that the little volume \* \* \* will be welcome not only to former students of this college but to those who have studied in other colleges and universities in India, and in fact to all who take an intelligent interest in the healthy progress of the Indian community. It may be of considerable value as a help to those who feel their need of help in dealing with some problems upon the right solution of which the well-being of this country in coming years will to a large extent depend. Mock modesty does not hinder me from saying this: for though the words of the book are mine, all the thoughts in it are Shakespeare's. I claim no credit but that of making an honest attempt to show how his great thoughts may serve the permanent needs of men and the present needs of India.

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The World of Books.

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A SHORT HISTORY OF ENGLISH COMMERCE AND INDUSTRY, by L. L. Price.  
(Edward Arnold. Price 5/6)

The end of one century and the beginning of another has some mysterious fascination. A man who never once looked beyond his own line of life is tempted to widen his view and enquire what people in other walks of life have done in the past hundred years. The parting of the centuries therefore gives an opportunity for taking stock of the progress made in the past and making prophecies as to the development in the future. Bound up as their civilisation is with material progress, a retrospect of commerce and industry ought to be interesting to the "nation of shopkeepers" even in ordinary times. It is doubly so at this juncture. Lord Rosebery in his Rectoral address at Glasgow said that the present century would be one of fierce competition and whether as merchants, warriors or statesmen, the English nation must become more business-like. Already the industrial and commercial supremacy of England is threatened by the plodding German and the inventive American and the question has come to be considered seriously whether England will last the century. Why is it that Germany and America have begun to supplant England in the markets of the world? Is it due to any special virtue which they have acquired or is it due to any defect which the Englishman won't care to rectify? Was the supremacy of England hitherto in commerce and manufactures, the cause or the effect of the expansion of the British Empire? Is the present industrial position of England secured on a solid foundation or was it the result of adventitious circumstances in the past? Are there defects to be repaired in the present industrial economy and is there adequate security that steps have been taken to maintain or improve the present position? These are questions which demand immediate attention at the hands of all who are responsible or care for the welfare of Britain and the British Empire. A retrospect of English commerce and industry at the present moment is therefore very opportune and we offer a cordial welcome to Mr. Price's neat little book of two hundred and fifty pages. Its object is to give a brief account of the industrial and commercial development of England from the earliest times to the reign of Queen Victoria. To us, who have yet a vast deal to do towards improving our economic position, the experience of England would afford several valuable lessons and the volume will amply

repay perusal. The book will serve as an admirable introduction to the study of the more elaborate works of Professor Ashley and Dr. Cunningham.

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THE LIFE OF A CENTURY. Edited by Edwin B. R. Hodder. (George Newnes. Parts I, II, III, & IV. Price 6d. each.)

The curtain has now just fallen on the nineteenth century and we are now at the threshold of the twentieth and it is but natural that many should be anxious to take a retrospect of the past, especially so at the present moment when Good Queen Victoria, the greatest personality of the century, has passed from real life into history. The advances of the nineteenth century have been really marvellous. Its progress has been many-sided. Its achievements in the different departments of knowledge have been truly wonderful. But at the same time even the diligent student who has plenty of leisure will be baffled by the number of books he has to read to post himself with even a superficial knowledge of the events and achievements of the expired century. What need we say of the busy men and women of the world! They will welcome with pleasure George Newnes' illustrated volumes of "The life of a Century." The story of the expired century is to be told in twelve parts and we have received the first four. The aim of the publication is in no way pretentious. There is nothing original about it. Free use is made of the writings of well-known authors and writers. It is made very readable and interesting by its easy and simple style, and one may read it with as much ease as he does a work of fiction or of travel. The four parts we have received are profusely illustrated. We cannot attempt at present anything like a regular review of this interesting and useful publication. That we reserve for a future occasion when we shall have the pleasure of reading the remaining volumes.

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THE SIEGE IN PEKING, by W. A. P. Martin. D. D. L. L. D. (Oliphant Anderson and Ferrier, Edinburgh and London).

Dr. Martin, President of the late Chinese Imperial University, has good reason to echo the old exclamation, "Save me from my friends". When he left China soon after the siege of Peking, so he tells us, he had no intention "of making a book," (sic). But his friends insisted, and so, "painful" though he found the task, he complied with their ill-advised request. The book before us is the result. Sketch wanting in literary form, marked by an extraordinary absence of perspective, and egotistical, it certainly will not redound to the re-

putation, we have no doubt, Dr. Martin has earned as an Educationist. The account of the siege itself cannot compare for a moment with the narrative of thrilling interest unfolded by Dr. Morrison at the time in the *London Times*, and for the rest, with the exception of certain little biographical details, which will no doubt be of interest to Dr. Martin's friends, but which the general public could very well have done without, we are given no information which the most desultory reader of the daily papers has not picked up months ago. One quotation will suffice to illustrate the egotistical trend of the book.

"When he (Li Hung Chang) proposed to me to accept the position, 'I consented to undertake it for two or three years, alleging my age as a reason for not thinking of a longer term of service. Surveying me from head to foot, 'I guess,' said he, 'you're good for another ten years: I wish I had your legs.'"

"It is this that counts with a statesman," said I, tapping on my forehead.

"Ah," he replied, with a smile, "but you are good at both ends."

This is possibly true:—Dr. Morrison is 70 years old,—but it is hardly of more interest to the general reader than is the information that "Miss Pierce, a fair niece of the Congers, inspired a young Dutchman, named Dhuyssberg, to perform more than one exploit in the siege.

—o—

SHAKESPEARE: THE MAN.—(*George N. Morang and Sons, Toronto.*)

Is the title of a small booklet in which Mr. Goldwin Smith tries to outline the personal character of the dramatist from such self-revelations as are vouchsafed in the dramas. From the views of Hallam who had an almost Wolfian scepticism about the author's personality as discoverable from the dramas to the views of Messrs. Bagehot and Frank Harris and George Brandes is a long step. Mr. Goldwin Smith's ambition does not soar so high as to follow in the wake of these last mentioned writers. "There are things" says the writer, "which strike us as said for their own sake more than because they fit the particular character; things which seem said with special feeling and emphasis; things which connect themselves with the writer's personal history." What these things are and what inferences may be drawn from them about that all but preter-human personality, we have them told us by the veteran Shakespeare lover in an engaging manner. A pleasant half hour can be promised to all who might be tempted to read the book.

☛ Books noted below will later on be reviewed at length.

THE SCIENCE OF CIVILIZATION.—by Cecil Balfour Phipson. (*Swan Sonnenschein & Co., Price 10/6 net.*)

The title of this book is somewhat misleading. Not many will agree that the science of civilisation is concerned solely with agricultural, industrial and commercial prosperity. Ordinarily, the progress of a nation in civilisation is tested not by its material improvement alone. Development in education, religion, and morals are also factors which are considered in arriving at the verdict. Yet, it is difficult to deny that the engrossing object of man is how to win his bread, and his capacity to do this stands at the root of all progress. Material improvement is the foundation on which a nation's greatness rests, and in this sense the title of the book appears appropriate. Practically, the object of the writer is to show what are the only means by which a nation can provide itself with a continuous and abundant supply of food and a continuous and increasing supply of comforts and how far the Government of a State can aid in this object. In this enquiry, some of the fundamental theories of political, moral and economic science are assailed, e.g., the Malthusian theory that population tends to outrun the means of subsistence unless restrained by checks, the Roman theory of justice that it is the duty of the State to enforce the payment of private debts, and the Philosophic theory of man that Reason is an efficient and his only dependable guide for conduct. The book is an important addition to the economic library. For this reason and on account of the rugged style in which the author expresses his many original and suggestive ideas, it demands close application and study.

—o—

HISTORY OF BRITISH INDIA.—*Vol. I & II.*  
—By Sir W. W. Hunter (*Longmans, Green and Co., Each volume 18/*)

There is a pathetic interest about these books. The late Sir William Hunter was one of the very few Anglo-Indians who sympathised with the people of India and interested himself throughout his life to make the History of India more truly known to Englishmen at home. Sir William Hunter lived "to accomplish a good deal." The "Rulers of India" series which he edited and to which he contributed a few volumes, his "Short History of the Indian people," the admirable little work on "England and India," not to speak of the monumental volumes of the Imperial Gazetteer of India—all these will testify to the great services rendered by the deceased to the cause of Indian History. The first volume

of "the History of British India" brings us down to the overthrow of the English in the Spice Archipelago. The second volume brings us down to the period of the union of the old and new companies under the Earl of Godolphin's Award. The author did not live to see this volume in its present form. A few days after he penned the last words in Chapter VIII, he was "lying dead—his end so sudden, so calm, and so mercifully wrapped in the sleep of unconsciousness that he had no time to give more than a bare hint of his wishes as to the book he had left incomplete." We are told by Mr. P. E. Roberts who is responsible for the remaining two chapters, that the exact date for the conclusion of the volume had not been finally fixed when death stayed the hand of the writer. Chapters I to VII were already set up in proof, while Chapter VIII existed in manuscript only. At first it was decided to publish the Volume as it stood, without the addition of a single word; but Sir William Hunter had left a rough outline sketch of what the next chapter was to be, together with abundant material, either collected by himself or amassed under his immediate direction, and eventually it was resolved to use that material so far as to carry the history to a convenient terminal date. Such a date was obviously afforded by the union of the two Companies under the provisions of the Earl of Godolphin's Award in 1708, and Chapter IX has therefore been added to round off the volume. Mr. Roberts, however, has done his task well and we are glad that the remaining volumes in the series have been entrusted to him.

—o—

A SHORT HISTORY OF OUR FIRST  
POSSESSION IN INDIA, FORT ST.  
GEORGE, MADRAS, *by Mrs. Frank Penny*  
(Messrs. Sonnenschein & Co.)

In this volume, Mrs. Penny, who has already gained a favourable reputation by her earlier works "Caste and Creed" and the "Romance of a Nautch girl," essays to trace the history of the English settlement at Madras from its first foundation to the present day. The life led in the seventeenth and eighteenth centuries by the early servants of the East India Company is sketched in some detail, and the names of all the worthies who contributed to build up the British power in Madras occur—Streynsham Master, Elihu Yale, Job Charnock, Clive, Hastings and the rest. As becomes the wife of the present chaplain of St. Mary's Church, Fort St. George, Mrs. Penny deals fully with the history of the Old Church in the Fort and appends a complete list of the monuments in its cemetery. The whole work possesses peculiar interest for the dweller in Madras, and

in a later issue we hope to deal with its subject-matter at greater length.

—o—

THE GREAT FAMINE *by Vaughan Nash.*  
(Longmans Green and Co.) Price 6s.

This book is mainly a reprint of the letters written by the author to the *Manchester Guardian* during the recent famine. Mr. Nash went about the various affected districts, availed himself of the advice of the British and Native members of the Civil Service and in every way tried his best to obtain authentic information on the spot. The book has therefore a special value.

If India, says Mr. Nash, is to recover herself, the policy of the immediate future must be directed to repairing, so far as they can be repaired, the mistakes of the past. They are (1) The restriction of land alienation, which is the salient feature of the Punjab Bill. Under this proposal the creditor is permitted no more than a maximum of fifteen years' enjoyment of the mortgaged property, after which it lapses to the debtor. (2) An elastic system of land revenue fluctuating with seasons and crops, collected at a convenient time, and based on an estimate of what the ryot may be reasonably asked to bear. (3) The introduction of usury laws as indulgent to the debtor as, say, the bill for the protection of English debtors which is now passing through Parliament. (4) The creation of a system of Government credit adequate in point of *personnel* and finances to assist the agricultural classes in the organisation of a reformed credit system. (5) The extension to money lenders' victims of some such Tenancy Act as protects the cultivator of the North-west Provinces; with, ultimately, a scheme, on the lines employed by Lord Cromer in the case of the *fellaheen*, to enable the ryots to buy back their land from the money-lender.

—o—

INDIAN FAMINES, THEIR CAUSES AND  
REMEDIES *by Prithvis Chandra Ray.*  
*Beneatola Lane, Calcutta. Price, Eight As.*

The author of this little book is not unknown to the Indian and the English public. He has already earned a reputation for sobriety and sound-thinking by the publication of his admirable work on "The Poverty Problem of India." In the volume before us, Mr. Ray seeks to deal with the question of Indian famines somewhat exhaustively. He discusses the causes that lead to the frequency of famines and suggests various remedies. We heartily join with Mr. Ray in wishing that "the miserable population of India will be better fortified against all freaks of climate and that famines will be less frequent in occurrence and less fatal in their results in this ancient and unhappy land in future."

**RUSSIA AGAINST INDIA** by *Archibald R. Colquhoun*: (Harper Brothers, London and New York. Price 5/s.)

In this book the author points out the possible danger of Russia one day proving herself a dangerous foe to English interests in India. His book is intended to bring before the Anglo-Saxon public an idea of the seriousness of the situation.

"With British interests in India are closely bound up the interests of the whole Anglo-Saxon race, and indeed of many of the Latin races as well. That these interests are in real jeopardy the writer has endeavoured to make quite plain. It is possible that the whole question may not come to a head during the next few years, but are we now bound to ensure as far as possible, for those that come after us the prestige our fathers bequeathed to us? At the same time, when we take a bird's eye view of the progress of Russia since the time of Peter the Great, when we look at the maps of Russia then and now—or even the maps of sixty years ago—we may not feel so certain of security even in our own times. The writer has given the outlines of a policy, at once bold and prudent, which alone would, in his opinion, meet the exigencies of the situation. But no such policy is likely to be initialled unless the people—who govern Governments—instruct themselves, become interested, and demand that measures be taken to safeguard the prestige of the Anglo-Saxon in Asia. It is a case of educating our masters."

This is what Mr. Colquhoun thinks. In our future notice we shall discuss at length how far he is justified in sounding the note of alarm.

**GENERAL JOHN JACOB**—by *Alexander Innes Shand*: (London Seeley & Co, Ltd., Price 16/s.)

"Another noble Englishman lies dead in India—the victim of neglect, if not of absolute persecution. Never did a finer soldier step than this gallant sentinel of our Indian frontier; never was merit more grudgingly rewarded; never was a man made to feel more literally the curse of an unfriended commoner's position in the refusal of official acknowledgment and professional promotion." This is a passage from the obituary notice that appeared in the *Daily Telegraph* on the occasion of the death of General John Jacob. The *Times* and the *Spectator* wrote in similar strain; the latter referring to General John Jacob as one of England's bravest and noblest sons, a *chivalier sans peur et sans reproche*, the brilliant swordsman, the originator of a military system, the skilful inventor, the only Englishman who has founded and given his name to a town in India and for ten years the lively and vigilant sentinel of the

frontier of our Indian Empire. Speaking of these belated tributes to a great and original genius, the author of the book, Mr. Shand, observes that these notices remind us that the gallant soldier John Jacob had only brevet rank in the army he did much to remodel and that the brilliant administrator who had brought order out of chaos, plenty out of sterility and prosperity out of desolation had been chilled by neglect and rewarded by disappointment. This is the burden of the melancholy song which Mr. Shand sings and yet it does not appear to be unjustified. John Jacob came to India in his sixteenth year as a cadet in the Bombay Artillery, and from that time for thirty years he served in India without taking any furlough. As Warden, Political Officer, Diplomatist, Civil Engineer, Mechanical Inventor, General Jacob applied himself vigorously and conscientiously to everything he undertook to do. The life and career of this ill-used Anglo-Indian is so interesting that we propose to refer to it again.

**WORLD POLITICS**.—by *Paul S. Reinsch*. Macmillan Co, London and New York, Price 3/6.)

This book is a welcome addition to the "citizen's library". It deals with world politics at the end of the Nineteenth Century as influenced by the oriental situation. The author has gathered into one harmonious picture the multitude of facts and considerations that go to make up international politics at the present time. According to him the true centre of interest in present international politics is the Chinese question. We are assured by him that he has attempted to keep himself free from *a priori* conceptions and prejudices and to view the great drama of contemporary life as an unimpassioned beholder who forbears to censure or commend. How far this has been accomplished, we shall refer to in our future notice of this book.

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## Topics from Periodicals.

## AMERICAN WOMEN AND POLITICS.

In the January number of the *Humanitarian*, Douglas M. Gane writes with much restraint, an interesting article on the above subject taking as his text a paper by Harriet Mill on "The Enfranchisement of Women" which appeared in the *Westminster Review* of July 1851 in which he agreed that for the interests, not only of women but of men and of women, the emancipation of women could not stop where it was, "for the system of education that then obtained hardly developed in them a sense of personal honor and of duty towards the public good. It is to be inferred, therefore, that the difference in their education and situation that would come as a result of their emancipation, would operate to bring about a higher public ideal and a nobler sense of public duty. Douglas M. Gane begins by enquiring if the condition of things at which the people of the United States have now arrived justifies Mrs. Mill's expectations, namely, that the enlarged sphere of women's influence would have a beneficial effect upon public life. After discussing the character and circumstances of the American women from the standpoint of De Toqueville who has given an admirable picture of them and who attributes the singular prosperity of the United States and the growing strength of the people to the superiority of their women and the ideal of American womanhood as portrayed by Mr. James Bryce whose admiration of the American constitution and of the American people is unbounded, he says:—

"If there is one feature in the United States more prominent than another—except it may be its abounding prosperity and the advancement of its women—it is the corruption of its political and municipal life. The administration of State and civic affairs according to the exigencies of party interests; the lowering of the moral tone of public service by making appointments to it the reward of party services; the prostitution of petty justice to party intrigues; the vicious doctrine of the spoils "that regards the public revenues as the prey of political victors; the unfair distribution of taxes; the improvident granting of city franchises and the jobbing of contracts; in fact all those irregularities that are embodied in and have called into existence, the popular term "boodles"; these and other malpractices, so well exemplified to the world in the proceedings of the Tammany Hall are facts too notorious to need recapitulation here. Politics in America is a profession and as a high code of morals is not imposed on it from without, it adopts its own code, which is a low one and is consulting only the interests of its members. It is the aim of the members to get on and as their legitimate remuneration is not in itself adequate to the duties they have to fulfil, it is notorious that they seek in political life a means of advancement not contemplated by the trust reposed in them.



Are then the expectations of Mrs. Mill in regard to the emancipation of American women realised? No. Is then the improvement of public life a ground upon which the enfranchisement of women may be safely granted?

—o—

#### SOCIAL AND POLITICAL JAPAN.

The *Humanitarian* for January opens with a report of an interview with the Japanese Minister in the course of which the latter furnishes the interviewer with some pleasantly instructive, but brief, details about the marvellous Japanese and their Government, whose prosperity is watched at present with absorbing interest by students as well as by politicians. Asked as to the present condition of political parties in Japan His Excellency declared that Japan may be called a constitutional Monarchy, although the Mikado has much greater powers than the sovereigns in some constitutional countries. The Parliament consists of two Houses. The Upper House numbers three hundred, and the crown appoints several life members, and the Lower House is like the House of Commons of England. But, if anyone thinks that the line of demarcation which exists between the two great political parties in England exists also in Japan, the Minister tells them:—

"We have not; we are all Progressives more or less. We are agreed on the principle of reform; we differ as to the way and the rate at which the assimilation to the West should take place. The field is held by the Progressives and Radicals (divided not in the principle but in the mode of introducing reform) and the Imperialists."

Passing on to matters educational, His Excellency says that there are 26,860 Elementary Schools, 150 Secondary Schools and two Universities, besides Normal Schools, Technical Schools, Girls' Schools, two Military and Naval Colleges.

The Japanese being naturally averse to religious bigotry and of a tolerant turn of mind, the christian propaganda is carried on without let or hindrance. Evidently His Excellency is not satisfied with the Missionary spirit in China and he thus puts his view:—

Your Missionaries, especially the Protestant ones, have frequently no tact. I do not complain of them in Japan, but in China, it would seem, they do not understand the people; they make no attempt to enter into their mind and feelings; they show no regard for their traditions.

His Excellency seems to cherish no fear about the peaceable settlement of the Korean question. He said:

All we advocate is the policy of the 'open door'. Russia professes to be equally anxious that the 'open door' should be maintained. What then is there to fear for?

At the close of the interview, His Excellency is put the very natural question "How do you like England?"—

I like England very much indeed? I like English people and their ways?"

But strange to say what he most admires in England is its financial prosperity. He went on:—

Why, the cost of the war in South Africa would have crippled any other nation considerably but the burden seems to sit quite lightly on your shoulders. You spend your millions, and you are not any the worse for your expenditure."

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#### WATER-SUPPLY IN MITIGATION OF DROUGHT IN INDIA.

The *Asiatic Quarterly Review*, for January contains the full text of the paper on "Water supply in Mitigation of Drought in India" read by William Sowerby C. E., M. Inst. C. E. F. G. S. before the East India Association. Mr. Sowerby speaks from the knowledge he has acquired during his twenty years' residence in various parts of India from the Himalayas to Cape Comorin. With a view to carry out, without disappointment, works of irrigation and in a way mitigate the frequent recurrences of Indian Famine, he proposes the introduction of Artesian wells to ensure abundant supplies of water especially when periodical monsoon rains in India fail. Canals for supply of water are the best where these are possible. The Artesian well-system is being considerably developed in the colonies, and parts of Africa, New Zealand and Austria. In the United States sinking large well-shafts has disappeared yielding place to the Artesian system of water supply:—

"The chief points to be generally considered in boring wells are the nature of the strata, likelihood of obtaining water, its character and constancy". The geological and hydrographical character of the formations through which the great Indian rivers flow are very varied, the rocks being often primary ones and not very absorbent or retentive of moisture; but the alluvial plains and valleys are certain to contain considerable quantities of water..... That considerable quantities of water could most undoubtedly be obtained in almost every part of India by means of those deep but inexpensive Artesian tube-wells is a fact of great importance and value and if they had been in existence during the recent famines, the fearful distress of the population and the loss of animals would have been greatly mitigated, if not absolutely prevented."

An Artesian tube well sunk at Hotfield 300 ft. in depth yields 1,200 gallons per hour equal to a supply of water for 5000 inhabitants by working 12 hours daily. Consider then the value of a number of wells sunk near to the large towns in India.

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#### HINDUISM AND CONSCIENCE.

The *Madras Christian College Magazine* for January opens with an interesting and suggestive

article on this subject by Mr. L. P. Larsen. The stock Missionary argument against Hinduism is here presented in a new light. It was often urged by the leaders of Christian religion that Hinduism inculcates ethics of a very questionable character and even gives support to practices distinctly immoral in their tendency. The futility of this contention seems to have forced itself upon the minds of the critics and they seem to have shifted their ground in a remarkable way. Mr. Larsen has given a very plain and lucid expression to this new attitude in the article before us. He admits that in Hindu literature we find here and there the highest ideals of morality, and he quotes from the Bhagavatgita and some of the Tamil poets, passages embodying the noblest ethical ideals while conceding that Hindu religion does recognise conscience and morality; he contends that so long as Hindu Pantheism does not recognise the personality of God and the personality of man, there can be no room for morality in the true sense of the term or for moral regeneration and reformation of man and that the tree of Pantheistic impersonality can only have the fruit of non-morality. The high moral ideals which he is compelled to admit, as pervading the sacred books of the Hindus are therefore mere adventitious circumstances and cannot be the direct and legitimate outcome of the root principles of Hindu religion. Many things may be found on a tree, he says, which are not its fruit, and by such things the nature and value of the tree ought not to be judged. It is impossible to grant the soundness of this contention unless and until it is shown conclusively that the doctrine of personality is the only possible basis of ethical life and that the ethical principles which are admittedly recognised in Hindu literature and practised by the Hindu community are the result of a cause other than Hinduism which recognises personality as a basic principle. Neither of these points has been established in the article before us and we must hold that the argument of Mr. Larsen so far as developed here is an unproved assertion.

#### REFORMS IN TAXATION.

Though Mr. R. T. Ely's treatment of the subject has special reference to the United States, still it is one in which all are interested and we shall be excused if we summarise Mr. Ely's remarks in the January number of the *Cosmopolitan*. The most important needs of the national government are three: (1) flexibility, making it possible to raise and lower public revenues in accordance with the exigencies of the situation. (2) a machinery which will enable us in all circumstances to avail ourselves of our national resources and (3) a tax system

which shall compel wealth to bear its due share of the public burdens.

Taking the second of the three needs mentioned, the one great dependence for national revenue has been the taxation of imported commodities. This has shown a tendency to shrink when the need for additional sums for public expenditure has been greatest as in the Civil War. In our internal revenue taxation there is additional machinery for rendering available the national resources but the internal revenue taxes like the customs duties are for the most part repressive in character, and do not reach the wealth of the country in an adequate manner.

The income tax appears to Mr. Ely as the one means for rounding out the national system of taxation as it would provide the needed flexible element, would render available to a greater extent our national resources, and would secure taxation more nearly in proportion to capacity. If the constitution of the states stands in the way, inheritance taxation, and taxation of interstate commerce in its various forms may be suggested as the nearest substitutes.

A present reform that is needed is the separation of the sources of state revenue from those of local revenues. Real estate is peculiarly well-fitted to serve as a source of local revenue and if the taxation be for local purposes uniformity may be secured and if property is assessed at a low valuation the tax rate must simply be correspondingly higher. Corporations doing a large business throughout the State are fit subjects for assessment and taxation by the State though it may be necessary to give a certain portion for local needs. Among such corporations are Railway Companies. The best method of taxing Railways is to assess the property at its full value determined by adding together the full value of all the stocks and bonds and then taking that proportion of the value of the entire Railway telegraph line etc, which is represented by the length of line within the State.

With regard to local municipal monopolies the surplus left after allowing a fair return to capital and labour must be taken. If vested interests make this practically impossible this is the ideal to be aimed at. The best method is that of public ownership and operation which at once turns the entire surplus into the public treasury.

As to the taxation of personal property, a great proportion of it is reached if we tax all visible tangible property and all corporations upon their full value as determined by stocks and bonds. A small taxation on the rental value of buildings and a one per cent. tax on the inheritance of personal estate would cover cases not already included.

In taxing corporations there must be distinction

between those which have special privileges and have large revenues and those which have no such privileges and are fully exposed to the disadvantages of competition. No disproportionate burdens must be laid on the latter.

Finally, attention may be called to the growing use throughout the civilized world of taxes upon inheritances and successions. If a proper minimum is exempted from taxation, a minimum sufficient to yield a livelihood in case of succession within the family, say, twelve thousand dollars, and a much smaller minimum for collateral inheritances—and if the tax is slightly progressive in two directions, namely, as the relationship of those succeeding to the property becomes more distant, and as the property increases in size, such taxation accords with the generally recognized principles of justice, and is capable of yielding large revenues.

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### THE IDEAL IN MODERN ART.

This is the title of a very thoughtful article which appears in the January number of *The Art Journal* from the pen of Mr. Rose G. Kingsley.

Conscientious reaction towards the ideal in art, is one of the most interesting and significant movements of the end of the nineteenth century. It has developed more rapidly on the Continent than in England; but that it has affected the greater part of Northern Europe, and that in Scandinavia, Germany, France, and England, its manifestations each year assume greater importance, is undeniable.

The human soul, it would seem, has grown weary of the brutalities of so-called realism, of the arid wastes of rank materialism, both in art and letters. Its cry is once more for the Ideal—for romance, for some mystery, for something to worship, for such art as shall lift it high above the mere sordid representations of the ugly, the ordinary, or, at best, the frivolous side of life that it knows only too well. It asks to be taken out of the Known into the Unknown. And the revolt against a *terre-a-terre* realism has found its refuge in works of purest imagination.

In France, such artists as Puvion de Chavennes, Gustave Moreau-Dagnan-Bouveret, Lhermitte, Cazin, Besson, Aman Jean, Bartholome the sculptor, are among the leaders, though in very varied ways of this movement towards the Ideal. It is represented by Von Uhde in Germany; by Skredsvig in Norway. In England, the three great idealists, Rossetti, Mr. Watts, and Sir. E. Burne Jones, have been its leaders, and have exercised a deep and lasting influence on the work of their European contemporaries, as well as on that of their fellow countrymen; while among the younger English artists we see each year fresh evidences of its growing strength.

It is the "beyond" in one form or another, that each is striving for in his own way, according to his personal temperament.

This sense of beyond, of mystery, of something to be worshipped, need not be limited to one obvious set of subjects. It may be found in pictures of merely natural objects revealed by the lofty imagination of the poet. We get a glimpse of higher things in the silvery poems of Corot's brush, and in the lives of Millet's peasants. Or, again, we may seek for the beyond in mystic conceptions of faith, of religion, in heroic myth, and in transcendental dreams of humanity. But let differences of subject and treatment be what they may, the movement towards the

Ideal does not undoubtedly preoccupy the mind of many a modern artist in a remarkable degree.

Here, however, we must note a special characteristic of the present reaction from materialism. Our modern artists have learnt too much from the naturalists, nay, even from the materialists of the nineteenth century, to sin against nature by idealizing, which really means falsifying the natural world. They have learned that truth to nature is absolutely essential to art. And therefore, we get the singular phenomenon of men who are at one and the same time mystics and realists; men who attempt the daring experiment which in any but very reverent hands leads often to absurd and sometimes to offensive results. What could be more ridiculous than certain pictures which were to be found in the Grand Palais of the Paris Exhibition last summer, in which stalwart Abgels appeared in present-day cornfields, or served monks with bread, or rocked babies in cradles? What more offensive than the commonplace vulgarity of Vollet's "Depart des trois Mages"—our blessed lady, an ordinary French model, with a collection of jewels hanging on a little stand at her feet, while St. Joseph, apparently regretting the departure of the Three Kings, looks out after them into the dark night. Nay, some like Jean Béraud, have gone yet further, and use such subjects as a medium for a scholastic propaganda.

The experiment, I repeat,—for an experiment it must always be to try to introduce the supernatural, to clothe what is purely spiritual, mystical, in actual form—needs to be treated with extreme reverence, with more than ordinary skill. And seldom has this experiment been undertaken of late years with more serious purpose than by Mr. Arthur Hacker in that subject which has attracted the artists of all times—the mystery of the Annunciation. Here, in common with the best of the modern idealists, he reverently endeavours to express the most mystic tenet of the Christian Faith, while remaining absolutely true to nature. His white-draped virgin is hardly flesh and blood, for he has refined away that flesh and blood until it is little more than the suggestion of spirit. But the copper waterpot at the well, the flowers of the field, the sparse grey foliage of the olives, the shining white-walled city are as true to the natural world as if no blue cloud, thin as smoke that flies upward a— the mysterious, lily-bearing angel floated softly overhead.

Very graceful, very tender, and very thoughtful, the picture is delightful in its light scheme of colour, its light touch, its dreamy atmospheric harmonies of white, grey, and blue. And above all, it is as an evidence of the reaction that we have always valued this work by Mr. Arthur Hacker; for in it, whatever its inevitable imperfections, he has travelled far towards that supreme goal of the artist, to evolve the Ideal from the Real, to apprehend the Spiritual in the Natural.

### The Press on The Indian Review.

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**The Liberty Review.**—The signed articles are of the varied character of our English high class monthly magazines.

**The Indian Journal of Education.**—Keeps well up to the standard of excellence of its first number and reflects the greatest credit on its conductors.

**The Oriental List.**—It is with great pleasure that we announce the appearance of a new high class magazine in India \* \* The *Indian Review*, published at Madras, promises to be an important organ of native opinion.

## DEPARTMENTAL REVIEWS &amp; NOTES.

## Educational.

*By a Headmaster.*

## KINDERGARTEN TEACHING IN INDIA.

Under the above title Messrs. Macmillan & Co. have published a book in three separate parts intended for the Infant, First, and Second Standards of our Primary course. The authorship of Mrs. I. Bhauder, our Inspectress, is a sufficient guarantee of their suitability and excellence. Everything has been done to adapt the Froebelian methods to the special needs of India. The stories and songs are all Indian, and the occupations, object-lessons, and games are eminently along 'national lines.' The illustrations are simple and will readily appeal to children.

As, perhaps, the first systematic attempt to popularise Kindergarten teaching in Madras, these Readers are entitled to a hearty welcome, and every teacher ought to hasten to make his acquaintance with them, as they contain an exposition, from one eminently qualified by experience and sympathy for the task, of what has long remained little more than a fondly-repeated name.

One remark, however, may be ventured. Can English, the language of these readers, be really intended to be taught in the Infant standard? Is a year or two sufficient for our children to acquire such a command of English idiom as the stories and lessons require? We can scarcely think so. If they are intended for use in European schools alone, are the stories properly chosen? Perhaps they are meant only for use in translations.

## MILITARY DRILL IN ENGLISH SCHOOLS.

The December issue of the (*London*) *Journal of Education* has a well-reasoned article on the subject. The writer urges that any deficiency in national defence should be met by more direct methods and is even prepared to consider conscription as a possible remedy. In Schools, however, he will have nothing but pure athletics and aim solely at the development of manliness, healthy activity, suppleness and strength of limb, a good carriage, and the fullest play for bodily energy generally. But military drill seems intended to excite martial ardour and a foolish vain glorious spirit among schoolboys; and this will only increase the already alarming spread of Hooliganism. The patriotism thus engendered is not the true patriotism. Says the writer:—

"On what does true patriotism depend? On a rational and affectionate recognition of the privileges we enjoy as citizens of free England; on the sentiment of gratitude to those of our fathers whose efforts and sacrifices have won these privileges for us; and on a strong desire to live such lives and do such work as shall show us to be worthy of our great inheritance. In this sense lessons on patriotism form an essential part of the education of an English citizen. But there are spurious as well as genuine forms of patriotism. It is not, for example, a necessary part of it to exult merely in the lust of conquest or in the display of power. Still less does it demand on our part an approval of all the wars in which the Government of the day may happen to engage. With the memories of Chatham, of Burke, of Fox, of Bright, and of Gladstone, as factors in the history of England, no one can seriously contend

that grave censure of a popular war is necessarily unpatriotic. There are at present two sections of the British people. The one, and the larger of the two, is composed of persons who conscientiously believe that the South African War was righteous and necessary, and that in the interests of civilization it was our duty to destroy the independence of two republics and to annex their territory. The other believes that the war might have been avoided by a higher and nobler statesmanship, and that the only kind of prestige worth possessing is that gained by justice and honour, and by a due regard to the rights and claims of others, especially of smaller and weaker communities than our own. While good men are thus divided, it cannot be the duty of a school-master to identify himself with either political party; and he is certainly not justified in gratifying the public opinion of the moment by encouraging among his boys the boastful and militant spirit which at other times he would, as a wise teacher, do his best to repress."

## PHONETIC METHOD OF TEACHING ENGLISH.

A teacher of English in a Swedish School recommends this method of teaching a language whose sounds and spelling are found difficult even to European foreigners. Dr. Henry Sweet's phonetic notation is to be adopted, and at the very beginning the pupil's attention must be concentrated on the *sound*, not on the *letter*. He is to start with a practical examination and analysis of some of the sounds of the Vernacular, which leads naturally to a short description of the organs of speech and their most important functions, aided by diagrams and an artificial larynx. Then the difference between voiced and voiceless consonants is demonstrated and brought home by constant practice. Then English vowels and consonants are taken up in succession and mastered. When this mastery of isolated words is complete, the phonetic texts are had recourse to for nine or ten weeks, a period generally found sufficient for laying the foundation of a good pronunciation, if to direct teaching be added the influence of a good example. As soon as a text is thus gone through, the pupil's capacity of distinguishing the sounds and handling the phonetic symbols is tested by his being made to write from dictation on the blackboard.

When this phonetic training is complete, the same pieces are taken up in their traditional spelling and the transition effected from the phonetic to ordinary spelling by concentrating attention on the latter. Phonetic transcription, adds the writer, is necessarily involved in this method.

## ITS ADOPTION IN INDIA.

The chief defect in modern language teaching, especially in that of English where the relation between the sound and the symbol is so utterly destroyed, is the overgrown 'belief in the letter' to the complete neglect of the sounds themselves which after all are the immediate expression of speech. In India the phonetic method has not been tried at all. It cannot be denied that it deserves trial at least. But will it have such a trial? It is worse than doubtful. The believer in it must have freedom and initiative to make the experiment. Which teacher has either? No educational establishment in this country is left free to adopt its methods. Text books and holidays and courses of instruction, and if certain people had their way, even fees are regulated by rule, thus making all original work impossible. How one longs for the day when schools would be emancipated, and attend solely to the work of *education*, careless of results at every stage

provided the final product at the end of the course be fit to enter upon the University course!

#### SELF-RELIANCE IN SCHOOLS.

B. P. said 'The main key to success in scouting is to have pluck, discretion, and self-reliance.' Words of greater import to education were never spoken, and educationists are greatly exercised as to how they should call forth this self-reliance which the same authority has defined as the ability to act "on your own book." Both Universities and schools require reform, and Prof. Armstrong F. R. S., is calling upon Headmasters to make progress, not at mail-coach and sailing-vessel speeds, but at the far quicker rates rendered possible by steam and electricity. Students should have less to do with mere books and set-lessons and more with practical studies and tangible things so that they may 'think in shape.' Problems must be set and time given to pupils to find their own solution; class rooms must be either converted into workshops or ample workshop accommodation must be provided. Prof. Armstrong proceeds:

As an example of the work of the rationally organized school of the future, let us assume that a boy has been set to solve some simple problem, and that this involves much experimental work; he should nevertheless first be required to write a description of what he is about to do, in which the motive by which he is guided is clearly stated. He would receive his instructions in the workshop, and, if there were not room in the workshop, he might then go to the class-room to do this writing; and when his statement had been approved by the workshop instructor he would carefully copy it out in the neat note-book in which the history of his researches is to be finally recorded. He would then, but only then, proceed to make experiments. If it were necessary, in fitting up the apparatus he required, to do any carpenter's or smith's work, he would incidentally get a lesson or gain practice in such work. Then, when the experiment was performed, an account of the results would be written up and conclusion drawn. This might give rise to arithmetical work, or a drawing or photograph might be required to illustrate the account, or some question of grammar or philology might arise. Incidentally, therefore, teaching would be given in a variety of subjects; several teachers might take part in the work, and it would be the duty of the directing instructor to see that proper opportunities were provided for them all. Under such a system boys would become handy and able and willing to help themselves in all sorts of emergencies. Their interest would no longer be confined to athletics. Girls would benefit even more than boys.

"SHORT HISTORY OF INDIA" FOR LOWER SECONDARY SCHOOLS,—by E. Marsden, Inspector of Schools Madras (Macmillan and Co.)

An easy reading book of History in English for use in the lower forms has long been a desideratum. Some teachers have even thought it desirable to take history through the vernaculars. Mr. Marsden's book is intended to obviate this change of system and is therefore written in very simple language suited to the capacity of pupils who have just begun the study of English. The illustrations are so many and so good that the little volume is really a marvel of cheapness. There is little doubt that it will supersede the other books in use, provided the examiners for the Lower Secondary lower their standard somewhat.

#### Legal.

By A High Court Vakil.

#### OUR EMPRESS.

Empress Victoria was nothing if she was not a thorough respecter of law. The fountainhead of all Law as she was, there was not a single act of hers that in any sense contravened law. With the course of politics, she never interfered: with the administration of law she never quarrelled. Even when measures were carried by the Houses of Parliament to which she was personally opposed, she gave her assent to them, because, in her view, no sovereign should oppose what the people wanted. The humanising influences of the laws of her illustrious reign should be separately treated and it is to be hoped that the various aspects of her reign (especially in the department of law) will be adequately dealt with both here and in England.

#### MR. JUSTICE RANADE.

The legal world has received a rude shock by the death of this great jurist. He was a man of many-sided activities and of cosmopolitan sympathies. This is likely to lead the public to ignore his services to the administration of law. Probably Dwarkanath Mather and Muthuswami Aiyar were greater judges than Ranade was. But Ranade committed fewer mistakes in the application of law than these two eminent judges. His was a thoroughly practical and analytical mind. He had a wonderful power of concentrating his attention upon the subject then before him: and he was never lured away by considerations of abstract justice from interpreting the law as it was. He was not a mere lawyer. He knew the people for whom the law was meant: He knew the conditions under which it was to be administered. His expositions were therefore practical and sound. In him law has lost an exponent who brought into the consideration of questions of law, a mind equipped with a knowledge of the bearings of abstract law upon the conditions of existence. Bombay has lost within the brief space of a decade two of her best men.—Telang and Ranade. They represented all that is best and practical amongst us.

#### THE APPOINTMENT OF JUDGES.

Mr. Stead, in his *Review of Reviews* for December, alludes to an article in the *National Review* upon the subject. It cannot be gainsaid that the profession of law is not attracting in England the best intellects of the day, as it used to do before. The giants of old who stood head and shoulders over all their compeers turned their eyes to law. It has no longer the same attraction for men of talent and of genius. It must therefore necessarily follow that the material from which the English Bench is recruited does not conduce to the production of eminent judges. Then again there is the system of party patronage in these appointments. The Conservatives have been in power for a long time. There have been various appointments during this period. The natural result is that the party has to bestow the posts upon men of second rate ability. This is what Mr. Stead and the writer in the *National Magazine* have to say upon the subject. "A writer signing himself 'E,' after an admiring tribute to the unimpeachable impartiality of Her Majesty's judges, goes on to lament that judgeships are almost exclusively given as a reward for Party services, and lie as much in the hands of the 'Whips' as the Chancellors. As a consequence our judges are declared to be very defective

in legal erudition: "The ordinary judge, from the Lords downwards, would be puzzled by even such a ludicrous test as the solicitors' final examination." Of our present Bench, "some of its judges are destitute of all but a slight smattering of legal knowledge; others are acquainted with the 'Annual Practice' and a text-book or two." If this be so the writer may well exclaim, "The system is essentially rotten." This is the cure he recommends:—

The remedy, therefore, must be drastic and speedy. The only sure and effectual way to deal with this anomalous evil is to take away the legal patronage from the Lord Chancellor and place it in other hands. And whose? Well, I would tentatively suggest that a committee of judges and barristers should be appointed for the express purpose of nominating the highest and lowest judicial officers for the consideration of the Crown. If this were done, the canker of Party politics would cease to gnaw at the effective administration of the law.

#### LEGAL REFORM.

The subject of Legal Reform had always exercised the minds of eminent lawyers. In England suggestions have been made regarding the codification of specific departments of law. But the suggestion is not likely to bear fruit. It is in England that Judge-made law plays the tyrant. *Stare Decisis* is a principle which is peculiarly applicable to the administration of justice in England. There are such a bewildering variety of judgments that it is possible that a litigant may lose a good case unless his counsel is able to point out whether a particular case has been doubted, dissented from or overruled in latter days. The system enables a clever advocate to snatch a victory, if his opponent is not equal to the occasion. Following as we have been the English practice of quoting authorities in this country, the danger in India, has not been so great as in England. Here, if there is a conflict of authorities, the legislature generally interposes to set the matter at rest. Although we agree in thinking that "nasty precedents, perhaps the mistakes of men gone by, should not be worshipped or followed to create injustice," still we hold with the writer in the *Canadian Law Journal* that the practice has been fruitful of beneficent influences in the administration of justice. He says, "Under this system has been built up the wonderful fabric of our common and equity law. Under it the law of England has developed as an organic growth in close touch with the practical requirements of those for whose use it exists and with the development of natural life. So that it has been well said that a closer connection between the springs of law and the springs of life it is impossible to find, look we the whole world over, than the common law of England."

This may look to be exaggerated, but there is no denying the fact that precedents have done much to create wholesome law in England. Therefore it is not possible to sweep out *nasty precedents* in deciding between parties. But it will be possible to *regulate* its use without abusing it.

#### JUNIOR AND SENIOR COUNSEL—PROPORTION OF FEES.

It is not possible in this country to fix the proportion of fees which a junior vakil should receive as compared with his senior. To a vakil there is but one fee allowed and that depends upon the amount of the subject matter. There is no taxing of the fees between the client and the vakil. But in a country where payment is made for the work done for the day, and where the system of payment is regulated by the rules of the law societies, the question

of fixing the proportion is practical and necessary. After consultation with the *Bar Committee*, the Incorporated Law Society passed last year the following resolution.

"That by long established and well-settled custom a junior is entitled to a fee of from threefifths to two-thirds of his leaders fee and that although there is no rigid rule of professional etiquette which prevents him from accepting a brief marked with a fee bearing a less proportion to his leader's fee, it is in accordance with the practice of the profession that he should refuse to do so in the absence of special circumstances affecting the particular case and that he should be supported by his leader in such action."

In replying to a memorial on the subject from the juniors, the council resolved to adhere to this rule and said that the fact that a particular leader makes it his practice to require a particular minimum brief fee did not by itself constitute an exception to this rule. We are not inclined to agree with the Incorporated Society in this latter answer. Some eminent counsel may not care to accept a brief unless a fee of 500 guineas is marked on the paper. Is it fair to expect a junior to such counsel to refuse a brief because a fee of 300 guineas is not offered to him? The rule should be restricted in its application to the fee which is generally allowed to senior counsel and should not apply to cases where senior counsel are in a position to dictate their own terms.

#### OBTAINING A RETAINER AND APPEARING FOR THE OPPOSITE SIDE.

Practical difficulties have been felt in this matter. A client engages a vakil to draw the pleadings and pays him. In the conduct of the case, he employs a new vakil. Is the first vakil precluded from taking up the case of his whilom client's opponent? The original rule of the Bar Council was this:—

"Counsel who has drawn pleadings or advised or accepted a brief during the progress of an action on behalf of any party shall not accept a retainer or brief from any other party without giving the party for whom he has drawn pleadings or advised, or on whose behalf he has accepted a brief, the opportunity of retaining or delivering a brief to him, but such counsel is entitled to a brief at the trial and on any interlocutory application where counsel is engaged, unless express notice to the contrary shall have been given to him with the instructions to draw such pleadings or advise, or at the time of the delivery of such brief. Provided always such counsel shall not be entitled to a brief in any case where he is unable or unwilling to accept the same without receiving a special fee."

To this rule an explanatory memorandum was added to this effect.

"Where a brief is offered or delivered to any counsel and he finds that another counsel has become entitled to a brief within the meaning of rule (already mentioned) and has not been briefed, such first named counsel ought when practicable to ascertain from the solicitor offering on delivering such brief whether there is any sufficient explanation why a brief, has not been offered or delivered to such other counsel and unless a *satisfactory explanation* is given ought to return or refuse the brief."

We hope that the spirit and letter of the above rules will be honestly adhered to by the professional men of this country.

#### THE STUDY OF JURISPRUDENCE IN INDIA.

The address which the Vice-Chancellor of the Punjab University delivered to the new recipients of degrees was a very practical one. Instead of following the hackneyed

footpath of exhorting his listeners to be true to themselves, to the University and to the Government—a wholesome lesson no doubt which can gain nothing by repetition year after year—the learned Vice-Chancellor applied himself to the task of explaining how the Science of Law ought to be studied in this country. He referred to Bentham, Austin & others and concluded a very interesting discourse in these terms:—

Finally, I would say to those of you who are or who have just completed the Law School course, do not leave jurisprudence behind you as you enter on the actual business of life. The muse of jurisprudence is no crabbed nor idle one. She can offer intellectual satisfaction more especially to those who can find pleasure in abstract ideas and abstract reasoning, but are repelled by the mysticism of some philosophies which move in an ever recurring cycle from mere assumption to mere scepticism, and which do not after all lift even one corner of the dark veil for ever drawn between humanity and the ultimate problems of life and mind. Far more than a means of intellectual satisfaction, jurisprudence from its effect upon the science of legislation has immense influence and immense value in practical affairs. By the Courts and by the legislatures law is ever in the making; and though Judges and legislators are mainly guided by actual requirements of the particular case or country and by the sagacity which they derive from habitual occupation in public business, the success of their efforts in making the law will surely in a great measure depend upon the soundness of their views on social and legal progress and the firmness of their grasp upon that science of legislation which is related to the Science of Jurisprudence as I have explained.

I have said nothing definite as yet on the moral aspect of the study, partly because that aspect is so obvious that a very few words will suffice, and partly because I did imply some allusion to the matter in the sketch I gave you of Bentham's life and personality, thinking as I made the sketch that, in the cause of morality, the example of such a benevolent sage as Bentham is far more precious than any lengthy discourse. I am afraid that lawyers as a class have no enviable reputation for benevolence and that there is at least one proverbial description of them which suggests that they are rather the enemies than the friends of mankind. No doubt in all professions men are to be found who prefer their private advantage to everything else, and have no regard for the well-being of Society except so far as it affects themselves. But if there are such men in the legal as in other professions, this should not blind us to the fact that the aim of all law is the prevention or mitigation of human suffering. If it is the object of Medical Science to check or alleviate physical disease or infirmity, it is no less an object of the Science of Jurisprudence to suggest the means of saving the innocent from those injuries which are habitually threatened by what is evil in the nature of man.

Jurisprudence indeed, and Justice and Mercy are three sisters, Jurisprudence is the wisdom and Mercy the grace of the law; and from underneath the place where these three are enthroned flow out continually the healing waters which, in proportion to the strength, the skill, the courage and the honesty with which they are directed, redress the grievances, right the wrongs or overwhelm the iniquities of mankind.

## Trade and Industry.

By A Mercantilist.

### THE LATE MR. JUSTICE RANADE.

Not alone as Judge and Father of the National Social Conference will the memory of the late Mr. Justice Ranade be cherished by the people of this country. He was one of those rare Indians who realised that, much as we may value progress in other directions, improvement in the *material* condition of the people is the foundation on which greatness in other respects should be built up. He sympathised with the aims and objects of the Indian National Congress and openly encouraged by his presence the deliberations of that body in its aspirations for political ascendancy. But political ascendancy is not the only particular vantage ground which we have lost. Greatness in commerce and manufactures naturally transfers political ascendancy and in this, more than in any others our collapse has been complete. This fact, Mr. Ranade realised long ago but to him the situation was not hopeless. Indeed, to him no situation was hopeless so long as the gravity of the position was recognised and strenuous attempts made to improve it. The question was simply *one* of ways and means and to discover them he devoted not a little of his life and intellect.

### THE LOSS TO INDIA.

The late Mr. Ranade was the leader of economic thought in India. At the present moment, the Government is casting about for remedies to relieve the indebtedness of the ryot, devising measures to impart technical education to the people. The Indian National Congress has realised that economic problems of vast importance have begun to press for solution. At this juncture, therefore, the advice of a man like Mr. Ranade would be invaluable. An ardent student, a hard thinker, a sober judge, and a practical guide, the death of Mr. Ranade is a grievous loss to the Government and to the country. His death creates a void to fill for which there seems no person, not even in the near future.

### INDUSTRIAL QUESTIONS AT THE CONGRESS.

We welcome the decision that the Congress should devote half a day's sitting for the discussion of industrial questions. But it is mainly a political institution in which certain classes will not or cannot take active part. It cannot also be denied that among the delegates to the Congress there are very few who could lead a useful discussion on industrial and economic questions by reason of their being employed in some trade or industry or at least having practically studied them, nevertheless, the resolution of the Congress is a move in the right direction and we hope the difficulties will be solved as experience is gained.

Meanwhile in discussing industrial questions, the Congress might well bear in mind the following axiomatic truths which the late Mr. Ranade enunciated in his inaugural address to the Industrial Conference at Poona in 1890.

1. The work of the Conference should be conducted, and its constitution framed on Non-sectarian and Non-party lines so that all classes of people may take part in it.
2. What we have chiefly to avoid is the pursuit of impracticable objects. We should husband our little resources to the best of our power, and not exhaust them



by vain complaints against the drain of the Indian tribute, or by giving battle with Free Trade

3. We must realise clearly our exact situation *i.e.* first, our phenomenal poverty, and secondly our growing dependence on the single and precarious resources of Agriculture.

4. Having realised this situation we must strive to correct it with a full sense that we cannot do all that we wish in a single year or a decade, and that we can at the most create the spirit and the tendency, and initiate the movement of change and set it afloat.

5. The proper scope of the work to be done is to correct the disproportion between our engrossing production of Raw Agricultural Produce and our backwardness in the production and distribution of manufactured produce.

6. In the accomplishment of this aim, we should not forget that there are permanent advantages and disadvantages enjoyed by certain countries and races which regulate the distribution and choice of Labour and that we cannot hope to accomplish impossibilities. And yet within these limits, there is ample scope for good and honest work for many a decade to come, in the utilisation of our existing,—relatively to us ample though as compared with other countries scanty,—resources of natural agents and capital, with our limitless supply of labour. The skill and patience of our industrial classes are a rich inheritance which cannot fail to help us, if we but provide a larger sphere for its growth and training.

7. Bearing these limitations and advantages in mind, our more immediate efforts should be directed to the improvement by art and industry of our raw wealth of agricultural produce, and of the articles which we send away as raw produce, and import as manufactured produce.

8. No hand-made industry can hope to thrive in competition with industry moved by cheap natural agents. The free use of natural agents, moreover, makes large investments of capital a necessity, and thus handicaps all individual efforts beyond rivalry. What we have to bear in mind is, therefore the organisation for industry and capital on the joint stock principle for collective and large undertakings.

9 The superior skill of the foreigner must be availed of freely by importing it from other countries, till we train up our own people for the work, first, in technical institutes, here and in foreign countries, and further in the far more practical discipline of factories and mills at work.

10. Our resources of Capital are scanty but it we only knew how to use such resources as we have and brought them together we have more Wealth and Capital than we can at present properly handle.

11. While we put forth our energies in these directions, we can well count upon the assistance of the state in regulating our co-operative efforts by helping us to form Deposit and Finance Banks, facilitating recoveries of advances made by them by encouraging New Industries with Guarantees or Subsidies or Loans at low interest by pioneering the way to new enterprises and by affording facilities for Emigration and Immigration and establishing Technical Institutes and buying more largely the stores they require here and in many cases by producing their own Stores.

12. State-help is after all, a subordinate factor in the Problem. Our own exertion and our own resolutions must conquer the difficulties which are chiefly our own creation;

#### THE CIVIC VIRTUE WE NEED.

In this connection, the following excerpt from a paper on "The present state of Indian Manufactures and Outlook of the same" read by the late Mr. Justice Ranade at the Industrial Conference, Poona, in 1893, will repay perusal :

What we have to do in each case is to learn by organised cooperation to compete with the foreigner and take in as much raw produce from abroad as we need, and work it up here and to send in place of our exports of raw produce, the same quantities in less bulky, but more valuable forms, after they have undergone the operation of Art manipulation, and afforded occupation to our Industrial Classes. I might illustrate this by the following table.

In place of Exporting.	Convert them into and Export.
Oil seeds	Oils
Dye-stuffs	Dyes and pigments
Wheat	Flour
Unhusked rice	Husked rice
Jaggery	Sugar
Raw cotton	Cotton goods
Raw wool	Woolen goods and Shawls
Raw silk	Silk goods
Jute and flax	Gunny bags, ropes
Hides and skins	Prepared tanned leather
Raw tobacco	Tobacco cured and cigars
Fish	Cured and salted fish
Rugs	Paper
Wood and timber	Carved wood and furniture

I might multiply this list without end. This is the practical work which Providence has set down for us to learn under the best of teachers. We have already made fair progress. We have to improve our raw materials or import them when our soil is unsuited to their production. We have to organise labour and capital by co-operation, and import freely foreign skill and machinery, till we learn our lessons properly and need no help. We have rusticated too long. We have to turn our apt hands to new work and bend our muscles to sturdier and honest labour. This is the civic virtue we have to learn, and according as we learn it or spurn it, we shall win or lose in the contest. We have to work against great odds, which are represented by our old traditions, our poverty of resources, and the hostile competition of advanced races, whose industrial organisation has been completed under more favorable conditions than our own.

#### LAW RELATING TO THE USE OF ASSUMED NAMES IN BUSINESS.

This act passed by the New York legislature was to have come into force on 1st September, 1900. It provides among other things that :—(1) No person or persons shall hereafter carry on or conduct or transact business in this state under any assumed name or under any designation, name or style, corporate or otherwise, other than the real name or names of the individual or individuals conducting or transacting such business unless such person or persons shall file in the office of the clerk of the county or counties in which such person or persons conduct or transact or intend to conduct or transact such business, a certificate setting forth the name under which such business is, or is to be conducted or transacted, and the true



or real full name or names of the person or persons conducting or transacting the same, with the post office address or addresses of said person or persons. Said certificate shall be executed and duly acknowledged by the person or persons so conducting, or intending to conduct, such business.

(2) Persons now conducting such business under an assumed name or under any such designation referred to in subdivision 1, shall file such certificate as hereinbefore prescribed within 30 days after this act shall take effect, and persons hereafter conducting or transacting said business as aforesaid shall, before commencing said business, file such certificate in the manner hereinbefore prescribed.

(3) The several country clerks of this state shall keep an alphabetical index of all persons filing certificates, provided for therein, and for the indexing and filing of such certificates they shall receive a fee of 25 cents. A copy of such certificate duly certified to by the county clerk in whose office the same shall be filed, shall be presumptive evidence in all courts of law in this state; of the facts herein contained.

(4) This act shall in no way affect or apply to any corporation duly organised under the laws of this state or to any corporation organised under the laws of any other state and lawfully doing business in this state nor shall this act be deemed or construed to prevent the lawful use of a partnership, name or designation, provided that such partnership, name or designation shall include the true or real name of at least one of such persons transacting such business.

#### ADVICE TO MANUFACTURERS.

Manufacturers, especially if they find their business failing or unable to compete with those of others in the line, should note the lesson of the following. An American manufacturer of steam specialties, visiting an English maker of the same class of goods, pointed to a certain article and asked, 'What is your price on this thing?' 'About nineteen dollars in your money,' replied the Englishman. 'What does it cost you?' 'I'll deliver at your doors all you want at seven dollars a piece,' said the American. 'How in the world do you do it?' inquired the Englishman. 'Well, I'll illustrate,' answered the American. 'You see that man across the street painting a sign. He's on a ladder—isn't he?—and there's another man on the side-walk holding the foot of the ladder. 'Yes.' 'Well, in America we have ladders that stand up by themselves—don't need a man to hold' em. So, you see, in this instance we divide the cost of labour exactly by two. That's how we do it.'

### TALES OF TENNALIRAMA.

(The famous Court Jester of Southern India.)

BY

PANDIT S. M. NATESA SASTRI, B. A.

(Member of the London Folklore Society.)

PRICE—EIGHT AS. \* ONE SHILLING.

The Civil and Military Gazette.— \* \* \* The tales are amusing, and to the folklorist may be of special interest. The printing and general production of the booklet are excellent. \* \* \*

APPLY TO—

G. A. NATESAN & Co., Publishers, Esplanade, Madras.

### Medical.

By a Doctor.

#### MATERIA MEDICA FOR INDIA.

This is the title of a work published by Messrs Thacker Spink of Calcutta and priced at Rs. 6. Messrs C. F. Ponder M. B. C. M., and D. Hooper, F. C. S. F. L. S. are the Joint authors of the book. The volume is intended for being introduced into British India as a text-book in materia medica for students in Medical Colleges and a handbook for general practitioners. An idea of the scope of the work may be had by the perusal of the following paragraphs taken from the author's introduction.

The Characters and Tests of each substance are given in accordance with the official description, and distinguishing features are noticed which will assist in identifying allied or adulterated drug. The tests used in recognising inorganic salts are fully explained, and tables of reactions of the chief elements and their compounds will be found serviceable to the practical student.

Doses are given in all cases where drugs are administered internally, and where necessary, the best method of exhibition or administration of the dose is recommended.

Preparations: The official descriptions are abbreviated except in regard to operations which can be carried out in an ordinary dispensary. The strength of all preparation is given in the text.

The Medicinal Properties have been compiled from standard works and chiefly from Sir T. Lander Brunton's "Manual of Pharmacology, Therapeutics and Materia Medica." The results of observations made during an extensive practice are also laid under tribute; and diseases are enumerated for which each drug is specially adapted.

The Chemical Combination is restricted to a reference to the acting principle or principles contained in each substance, according to the most recent investigations. For further details concerning the chemistry of drugs the enquirer is referred to such works as the "Pharmacographia" and the "pharmacographia India."

Practical hints on Dispensing and Incarcer-tibles will be found throughout the volume; these, it is hoped, will prove of service to the faculty in drawing up prescriptions as well as to the compounder in dispensing them.

#### AN ALLEGED CURE FOR LEPROSY.

The Berlin correspondent of the *Daily Express* writes:—

Dr. Adolpho Mercondes de Moura, of St. Paul (Brazils), contributes a paper on the application of rattlesnake poison to the cure of leprosy to the German *Medical Weekly Journal*. This poison has been used for a long period by the natives for treatment of skin diseases and even leprosy. Many wonderful cures of lepers through rattlesnake bites having been reported to him, Dr. de Moura set himself to make investigations. He experimented with the poison of fifteen lepers, and he has come to the conclusion that the lepra tuberculosa if not complicated with another disease is curable by its means.

#### THE COMPARATIVE AGE OF MEN AND WOMEN.

To the question so frequently asked if women attain an extraordinary age more often than men, a medical paper gives the answer in the affirmative. In proof of the statement two instances are cited.

One of the most celebrated female centenarians was the Countess Desmond, who lived 145 years, and died in the reign of James I. as the result of an accident.

This extraordinary woman was, at the age of 100 years, so active and lively that she used to take her part in dances with young people. At the age of 145 years she travelled from Bristol to London, no small undertaking in those days. Even this instance, however, is surpassed by the case of a Frenchwoman, named Marie Prion, who died, at, St. Clombe, at the age of 150 years. Towards the end of her life she was fed entirely upon goat's milk and cheese. While her body was so withered that she weighed only forty-six pounds, she preserved her faculties intact almost to the end. It is an extraordinary but incontestable fact says the *Medical Journal* that certain women at an age when most men are near their end undergo a species of natural rejuvenation, the wrinkles disappearing, and the senses of hearing and sight recovering their pristine acuteness.

#### CHOLERA: ITS CAUSES AND PREVENTION.

This is the title of a pamphlet published by Mr. T. V. Venkatarama Iyer, certificated Sanitary Inspector. The author advocates hydropathic system of treating cases of cholera in preference to the present way of treating the disease by means of drugs. He complains that the former treatment has not received a fair trial at the hands of the general public and instead of drugs, the author suggests several methods of treatment according to the hygienic system of hydropathy or water-cure.

#### ALCOHOL AND PNEUMONIA.

Pneumonia or Inflammation of the lungs is a disease that has always demanded and obtained consideration from earliest times, but it is only recently that the true nature of the disease has been discovered. The most recent workers in this branch of pathology teach that pneumonia is not an inflammation of the lungs pure and simple, but a specific fever that should rank in the same category as scarlet fever, typhoid fever or diphtheria, the difference in each case being the locality or rather organ which is most affected by the poisonous toxins that are elaborated by the special germ in each disease. Thus in scarlet fever, the kidneys are the organs that suffer principally, in diphtheria, the nervous system, and in pneumonia it is the lungs that are attacked. Pneumonia is a fairly common disease, and so is the habit of taking alcohol and this short note is written to draw attention to the relations that exist between "alcohol taking" and pneumonia.

It is a well-known clinical fact that those addicted to the use of alcohol fare very badly when attacked by pneumonia. Indeed, the mortality among drinkers is very high in every disease, but is especially marked in pneumonia.

Every hospital surgeon, or doctor whose work lies among the poor in England can testify to the gravity of cases of pneumonia occurring not necessarily in drunkards (in the sense that a man is only a drunkard who is habitually intoxicated), but also in patients who, though never actually drunk, have contracted the pernicious habit of nipping, and those who have the temperance question at heart can adduce one more to the many excellent and powerful reasons why alcohol should be eschewed by some people, by placing prominently before the public among whom they work the fact that alcohol is a dangerous poison to a large number of people and that some of its worst effects are seen in a disease like pneumonia occurring in a subject who takes alcohol in excess.

#### PROGRESS IN PENOLOGY.

In connection with the article on "The criminal responsibility of the Insane" which appeared in the February Number of this *Review*, the following will be read with interest:—Mr. S. L. Barrows, writing in the *Forum*, says the treatment of the criminal insane from a medical rather than a penal standpoint is a marked feature of advance in penology. The whole judicial procedure of civilised countries has been modified by the necessity of determining the question of responsibility. If an accused person is adjudged to have been insane before the offence was committed, the act is not regarded as criminal, and he is sent to an insane asylum. A prisoner who becomes insane after commitment to prison is likewise transferred to an asylum. But the objection to receiving insane criminals in hospitals organised for those who are not criminals, combined with the necessity for greater restraint, has led to the establishment of special quarters for the insane in prisons and to other special asylums. Such asylums now exist in New York, Massachusetts, Michigan, and Illinois, as well as in Canada, Saxony, Baden, Hungary, England, Belgium, Norway and Italy. The close of the century is signalled by a notable step taken by Russia in abolishing deportation as a part of her penal system, with the exception of a small penal colony for political and habitual offenders. This is a step long contemplated by Russia, and now determined upon after the most positive evidence of the evils of deportation to Siberia. Russia is about to make provision in prisons for 14,000 more prisoners; and she has appropriated 3,520,000 dols. for the new buildings which must be erected for the 8,000 who cannot be accommodated in existing prisons. This new step by Russia marks the practical abandonment of transportation by all civilised countries with the exception of France, which still supports penal colonies; but the latter are secondary features of the French system.

Continuing, the writer says:—If asked to sum up in a paragraph the most important indications of progress in penology, the representatives of different schools would undoubtedly differ; but speaking as a student of tendencies, principles, and results, and not as the exponent of a school, I should say that progress in the century just closed is evident in the following points:—(1) The higher standard of prison construction and administration; (2) the improved *Personnel* in prison management; (3) the recognition of labour as a disciplinary and reformatory agent; (4) the substitution of productive for unproductive labour, and to a small degree required for unrequited labour; (5) an improvement in prison dietaries; (6) new and better principles of classification; (7) the substitution of a reformatory for a retributory system; (8) probation, or conditional release for first offenders, with friendly surveillance; (9) the parole system of conditional liberation, found in its best form in the indeterminate sentence as an adjunct of a reformatory system and as a means for the protection of society; (10) the certillon system for the identification of prisoners; (11) the new attention given to the study of the criminal, his environment and history; (12) the separation of accidental from habitual criminals; (13) abandonment of transportation; (14) the human treatment of the criminal insane; the improvement in criminal procedure; more effective organisation in relief and protective work and in the study of penological problems; and (15) the new emphasis laid upon preventive, instead of punitive or merely corrective, measures.

## Science.

*By a Master of Arts.*

### THE "TELEGRAPHONE" AT THE PARIS EXHIBITION.

Hriday Chunder Bonerjee, M.A., writes to the *Dawn*:—

It has long been the aim of scientific workers to record the messages transmitted by a Telephone and this has seemed simple enough in theory since the invention of the Phonograph. But the practical combination of the Telephone with the Phonograph has been a matter of great difficulty. This difficult problem, however, of recording Telephone messages is nearing a practical solution. The "Telegraphone" is an instrument for recording such messages—by Herr Valdemar Poulsen, a Danish electrician, and is on view at the Paris Exhibition. Instead of the ordinary Telephone receiver, he uses an electro-magnet, the coils of which receive the varying currents sent from the transmitting instrument. Between the poles of this electro-magnet is passed a steel band—which is moved forward at a uniform and rapid rate of speed. As the coils of the electro-magnet are excited in different ways, the steel band is magnetized differently at different points, corresponding to vibrations of the speaker's voice at the transmitting end. Thus the steel band will form a magnetic record of the Telephone message.

Now this steel band may again be used for reproducing the original speech. The coils of the electro-magnet are connected in series with a receiving Telephone and the steel band containing the record is caused to move again at the same speed and in the same direction between the poles of the magnet. The different magnetic condition of the steel at different points of its length induces fluctuating currents in the electro-magnet coils and these passing through the Telephone coils throw the iron diaphragm into vibrations.

It has also been found possible to greatly increase the loudness of the recorded message by a simple arrangement and this leads to the use of Telephone relays—thereby increasing the limits to which sound can be transmitted.

### PROFESSOR RAMSAY AT PROF. GAGGER'S LABORATORY.

The *Indian Textile Journal* states that Professor William Ramsay, of University College, London, who arrived in Bombay last month at the invitation of Mr. J. N. Tata, to advise in the organization of the University of Research, visited Professor T. K. Gajjar's Techno-Chemical Laboratory. He selected this institution for his first visit out of the list submitted to him of institutions for higher education in the city, as his special studies are in the line of chemistry, and as the first department to be organized in connection with the Tata University is that of technological chemistry. He went over the whole laboratory, and was pleased with the equipment and the work of the students, some of whom were engaged in higher analytical works, and others in technological work, such as experiments on the technology of fibres, soap, testing of lubricants, analysis of chimney gas, and preparation of certain chemical germicides. He was struck with the beautiful saffron-like crystals of iodine tri-chloride being prepared by such a simple method as that adopted in the laboratory, and he remarked that he had never before seen such fine crystals of the chemical.

### THE DISTINGUISHING NOTE OF THE CENTURY.

The Right Hon. A.J. Balfour, M.P. says it is the growth of science. On this point, observes Mr. Balfour, I range myself with those who find this characteristic notes in the growth of science. In the last hundred years the world has seen great wars, great national and social upheavals, great religious movements, great economic changes. Literature and Art have had their triumphs, and have permanently enriched the intellectual inheritance of our race. Yet, large as is the space which subjects like this legitimately fill in our thoughts, such as they will occupy the future historian, it is not among these that I seek for the most fundamental difference which separates the present from preceding ages. It is to be found in the cumulative products of scientific research, to which no other period offers a precedent or a parallel. No single discovery, it may be, can be compared in its results to that of Copernicus. No single discoverer can be compared in genius to Newton. But in their total effects the advances made by the nineteenth century are not to be matched. The difficulty is not so much to find the departments of knowledge which are either entirely new or have suffered complete reconstruction but to find the departments of knowledge in which no such revolutionary change has taken place.

### ELECTRICITY IN GERMAN FARMS.

Under date of 23rd August, 1900, the United States Consul at Coburg says:—

"In this and neighbouring parts of Germany, considerable attention is being paid to electrical appliances that can be used on the farm. Near Ochsenfurt, in Bavaria, a company composed of land-owners and small farmers has been organised for the establishment of an electrical system for use on their farms and in villages. The power is to be generated by steam and water and the current to be distributed from a central station to the places at which it is wanted. Sub-stations are to be established at given points, with the necessary apparatus for connecting with the farm or other machinery, and also for lighting purposes in the houses, offices, roads, and village streets." What a contrast between the German and Indian peasants!

### TYPE-WRITTEN MESSAGES THROUGH TELEPHONE.

The *Board of Trade Journal* for the week ending 11th October 1900, states that Mr. Simon, the Danish Consul at Mannheim, is in possession of an apparatus by which a person having a telephone can send a type-written message which will appear in type-written print at the destination with which the apparatus is connected. No further details are given but it is stated that Siemens and Halske are bringing this apparatus before the public.

### COMBUSTIBLE GASES OF THE AIR.

Continuing his studies regarding the combustible gases contained in different atmospheres, M. Gantier made a communication to the French Academy of Sciences consisting of a detailed account supported by very complete analyses of the air of woods and high mountains.

In the air of woods hydrogen and carbon are in much smaller quantity than in the towns, but the proportion of the quantities of these two gases indicates that there is a considerable amount of hydro-carbides in the air of woods. Air of the higher regions collected in districts as destitute as possible of animal plants and human beings is almost completely free from hydro-carbides, but, contains nearly 2-10-000ths of its weight of free hydrogen.—*The Inventor's Review*.

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All contributions, books for review, should be addressed to MR. G. A. NATESAN, Editor, Indian Review, Esplanade, Madras.

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SINCE the demise of our beloved Queen, meetings have been held in all parts of the Indian Empire to bemoan her loss and to perpetuate her memory in a suitable form. Calcutta, the seat of the Imperial Government, has at the instance of the Viceroy resolved to erect a grand and magnificent building. We are told that the central idea of the Victoria Hall is that it should be a Historical Museum, a National Gallery, and that it should exist not for the advertisement of the present, but for the commemoration of that which is honourable and glorious in the past. In the course of a long and eloquent speech on the subject at the meeting of the Royal Asiatic Society at Calcutta the Viceroy said :—

I believe that this building will give to all who enter it, whether English or Indians, a pride in their country, in addition to reminding them of the veneration that all alike entertain for the great Sovereign in whose honour it was built. I believe that it will teach more history and better history than a study full of books. I believe that it will appeal to the poor people just as directly as to the rich ; and that they will wander, wondering perhaps, but interested and receptive, through its halls.

If the hall is to be an accomplished fact and is to be enriched with historical remains in the manner described eloquently by the Viceroy, it will certainly be a magnificent monument to the memory of the Queen. Few will be disposed to question the form of this great memorial but for the conviction strongly prevalent in the minds of many that a poor country like India, with its starving millions and its chronic famines, could ill afford to petrify many lakhs of rupees in bricks and mortar. But Caesar has so willed it and his will will prevail. Munificent subscriptions have already poured in, and with the tempting offer of the Viceroy to inscribe on marble the names of large donors, there is no doubt that the scheme would be a success.

WE do not believe Lord Curzon's proposal to erect the great Victoria Hall at Calcutta is so bad that his Lordship should have thought it worth while to belittle other schemes. Referring to the widespread desire that the present opportunity should be availed of to promote technical education, the Viceroy said:—

Some people talk and write as though technical instruction were going to solve the Indian agrarian problem and to convert millions of needy peasants into flourishing artisans. Gentlemen, long after every one in this room has mouldered into dust, the economic problem will confront the rulers of India. It is not to be solved by a batch of institutes or a cluster of polytechnics. They will scarcely produce a ripple in the great ocean of social and industrial forces.

In replying to the prayer of the Madras Mahajana Sabha to reduce the present heavy land assessment, Lord Curzon tauntingly asked them whether in case the assessment was lowered by 25 p. c. the famine would decrease to that extent. And so the Viceroy has faith neither in industrial education nor in the reduction of the land assessment for solving the Indian economic problem. It is a pity Lord Curzon has not acquainted the public with his views as to the right method of solving it. We confess the question is difficult and complicated, that it does not offer the same scope for a display of imagination and eloquence as the theme of a grand Victoria Hall. But we do not suppose that the economic situation is so complex, as to render the solution of it hopeless and irremediable. If Lord Curzon had spent half as much of his time and talents and position in solving the Indian economic problem as he has so enthusiastically done for the Victoria Hall, his lordship would not have indulged in such language towards the scheme for technical education. The Victoria Hall may soon become an accomplished fact and its walls might be decorated with many things worth preserving, but if the Indian economic problem is to remain unsolved for a long time and famine and pestilence are to havoc in the future as they have done in the past, true history would require it to be painted in the walls of the Imperial hall, pictures of millions of people dying during times of famine and helpless orphans crying aloud to be taken care of by any one that passes by.

To many, however, it will be a consolation that though the Viceroy's pronouncement on technical and industrial education is rather disappointing, the Governors of Bombay and Madras have taken up the question seriously. Lord Northcote has urged the importance of the subject in his recent address at the Bombay

University Convocation and we are glad to note that Lord Amthill, the Governor of Madras, has lent his warm support to the local memorial, the funds of which will be devoted for the encouragement of Industrial and Technical Education in co-operation with the already-existing Victoria Technical Institute.

WHAT is known as the "Noakhali case," is creating a good deal of sensation throughout the country.

Mr. Pennell.

There is no doubt that Mr. Pennell's judgment is unduly long and that it contains many irrelevant matters. But it may be urged on his behalf that Mr. Pennell could not have found a better method of exposing the facts stated therein. His judgment is a regular indictment against the Bengal Government. Mr. Pennell accuses a host of distinguished officials, such as His Excellency the Viceroy, His Honor the Lieutenant-Governor, their Chief Secretaries, the District Magistrates, Superintendents of Police, District Engineers, and even Judges of the High Court. The gravest accusation is against Sir John Woodburn, Lieutenant Governor of Bengal, who is charged with intimidating Mr. Pennell in the legitimate discharge of his duties as a judge. There are serious disclosures and statements which, in the interests of the parties concerned and of the reputation of the Government, ought to be enquired into carefully. Without attempting to make political capital of this matter, it may be useful to bear in mind that this case, like the Chupra scandal, affords a fresh illustration of the evils of the combination of the executive and judicial functions.

THE most noteworthy feature of the recent tour of Lord Amthill was the privilege he accorded to the ryots of the places visited, to appear before him in person and express their grievances. Hitherto, to the average Indian ryot the visit of a Governor meant, apparently, nothing beyond the splendid show of ornamental arches. It was very good of Amthill to have made the ryots feel that the object of his tour was to acquaint himself with real grievances. This is not the first indication of His Excellency's solicitude to acquaint himself with the general condition of the people, for, almost his first act after assuming office was to invite the District officials and some non-officials for a conference in private. And whatever may come out of the personal enquiry held by His Excellency, it at least shows that the new Governor is inclined to hear grievances directly from the parties concerned, and we trust Lord Amthill will continue to evince the same interest in the ryots as he has done hitherto.

WE draw the attention of our readers to the advertisement appearing elsewhere regarding the "Standard Library of Famous Literature" and the leaflets circulated with this number. The Library, which is complete in 20 large handsome volumes of about 500 pages each, was edited by Dr. Richard Garnett, C. B., LL. D., who was assisted by a staff of several well known international collaborators. The Library is supplemented with a series of 20 original essays dealing with literary subjects, one to introduce each volume, which were specially written for the work by such distinguished literary men as Sir Walter Besant, Henry James, Dean Farrar, Prof. Mahaffy, Bret Harte, Andrew Lang, Maurice Maeterlinck, Ferdinand Brunetiere, Emile Zola, Paul Bourget, and others. It is well illustrated, containing 500 full-page illustrations comprising portraits of great writers, past and present, famous literary scenes, pictures of distinguished living authors at home, seated at their desks, besides a series of coloured plates reproduced from antique originals. To supplement and complete this, *The Standard* has reproduced in photogravure ten celebrated literary paintings, each of which is worthy of framing. These exquisite examples of the work of the best Parisian engravers are a part of the "Library" and cannot be obtained separately. They are bound and forwarded in a handsome portfolio. The photogravures are hand-etched, printed on heavy *papier marais*, 22 by 23 inches, and have an engraved surface of 12 by 15 inches. We have seen these handsome volumes in the three different styles of binding and the photogravures offered with the books and we may safely say that the advertisement is no boom but an actual statement of facts. As *The Standard's* offer is shortly to be withdrawn intending purchasers would do well to hasten. To many the instalment system will be a great boon.

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#### AN ANGLO-INDIAN OF OLD.

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TO men like myself, reposing under the cold grey skies of Britain, missing the brightness of the Indian sun and the quiet but cheerful landscapes so long familiar, there is a pensive pleasure in the perusal of memoirs and journals, written by Anglo-Indian Officers of the olden times, when the East India Company pervaded all things Indian, with its army and navy and civil service, its wars

and treaties with the native kings, its oriental commerce, stretching from Ormuz to Cathay, its stock on the London exchange and its opulent directors. In those pages we find preserved, almost with the freshness of to-day, the jealousies and ambitions, the hopes and fears, the joys and sorrows of the people of former generations, who began Indian life much as we did, for all the differences of life and manners caused by the progress of time. Yet as we read, we know that those passions are hushed long ago, the writer and his companions having passed away, belonging like all the events and anecdotes to the silent past. Their lot somewhat resembles that of the retired Indian official, cut off from the people he knew and the scenes he had loved so long; this is the root of the pensive charm, the memory of those years of lang-syne, those days of so many bye-gones.

In handling the literature of a small second-hand shop, I encountered two neglected volumes, neatly printed and adorned with many engravings of pictures drawn on the spot by the author in his forty changeeful years of service. Published in 1830, they had remained clean and uncut. They contain the *Reminiscences of Colonel James Welsh*, of the Madras Establishment. Born in Edinburgh, he tells us that at the inexperienced age of fifteen he was launched into the world without a pilot, in 1790, when he went out to Madras as a cadet and was posted to the 3rd European Regiment at Vellore. From that time till he retired in 1829 from Belgaum where he was General over the Dooab Force, he kept hasty journals from which at Cheltenham he compiled his book. During this long period he took part in many wars, against the French, the Marattas, the Polygars, the Dutch in Ceylon, the rebels in Travancore, Kolhapur and elsewhere. He appears always as an ardent soldier, a fine rider and sportsman, a pious Christian and a sedate man, who had learned to understand the people and to treat them well. Unlike many we have known, his sunshiny good-humour beamed over them as much as over the Europeans. The cheerful-

ness that brightened all his career was in large part due, as in many other cases, to getting under good influences at the start. At Vellore he found the pilot he needed for the voyage of life. The Adjutant, Lieut. Ridgeway Mealy, took him into his own house and became a second parent. "To him," says Welsh, "I owe my early knowledge of my duty as a soldier, of the Persian and Hindustani languages, and, in short, whatever I acquired, was instigated and enforced by him." The stress laid on languages is explained by the regulation made a short time before, that officers with native regiments were obliged to learn them, while those who failed to pass were shut out from the regimental staff appointments. A Native Regiment then had a Captain Commandant, with enormous emoluments and power, a European Adjutant, an Assistant Surgeon and six or eight Subalterns.

Besides many curious adventures and incidents of life, Colonel Welsh records fairly vivid descriptions of the great men of that age whom he came across; and as he is rarely or never quoted, I feel that in bringing some of these portraits to light, I am not handling what has become trite or common. In 1805 he was with his regiment at Seringapatam to take the field under Major-General Arthur Wellesley, against the Marattas. The "Sepoy-General," as he calls him, was then in his prime, 34 years of age, living in a Garden Palace called the Dowlat Bagh, where he had restored some native paintings making fun of the Europeans. He had also placed English guards to protect the Mosque and tombs of Hyder Ali and Tippu Sultan. Welsh was with Wellesley's army at the storming of Ahmednagar in 1803 of which he gives a spirited account. Duelling was allowed under the guns of that fortress. Only a day or two before two officers of the 78th Highlanders had a duel over a trivial matter when one killed the other. This might have been prevented, had one of the seconds chosen to heal the quarrel; but this person having two days later shewn brutal ferocity towards another officer, Wellesley turned him out

of the camp, in order that such a wretch might not share in the honours of the battle. The General is again seen receiving Scindia's Vakeel, Eshwantrao Ghorpade, nephew of Morari Rao, who came with proposals for peace after the battle of Assaye, a fine looking man of sense and dignity. He was escorted into camp by Mr. Mountstuart Elphinstone. Every officer who could command a charger or a tolerably clean suit joined Wellesley, and they cantered along to the Maratta lines where the Vakeel had dismounted to receive him. "We all alighted, when a *gulleh-millow* or hugging scene commenced among the great folks, which lasted some minutes; after which the ambassador and General Wellesley again mounted, followed by the rest, and the cavalcade returned by torch-light to headquarters, where the band of his Majesty's 78th Regiment and a company were drawn up, who saluted the Vakeel as he dismounted." Welsh managed to get into Wellesley's single-poled tent, a square of about 36 feet, and stand close to his chair, when our General distributed *Pan supari* and presented the Vakeel with two superb jewels and a rich gold chain, to which he added at the close of the interview a very large elephant and a beautiful horse. Soon after Argaum we find Wellesley shewing the same tactful courtesy to Gokle, the General of our ally, the Peshwa. "He made him a present of a handsome bandy, or gig, which had come all the way, apparently for this sole purpose, and drove him home himself in it. The General indeed appeared in such high spirits and good humour, that we augured some peaceful tidings must have reached him." Interviews with the Peshwa's brother Amrut Rao and with Yeetel Punt the Vakeel of the Raja of Berar, were also witnessed by Welsh. Wellesley's return visit to the Berar Vakeel took place in a tent where a carpet was spread upon the floor, on which they all squatted like a company of tailors. Sir John Malcolm, the Political Agent, mixed much Persian with his Hindustani; but the Vakeel wishing to say some-

thing for Wellesley's ear alone, changed from Persian verses to Moors, the ordinary Urdu, to which Wellesley as kindly and readily replied. Our great General, who could be direct and blunt when he liked—as when he replied to Ghorpade about the morrow's camp, "I never tell anybody when, or where I intend to march,"—seems to have been very courteous in all his dealings with these Indian Lords; and it is a noteworthy fact that he could converse in their *lingua franca*. Many years after, in 1827, when Welsh commanded at Belgaum, as he approached the noble fort of Nipani, he was met by a fine-looking, manly old fellow, riding with a crowd of horse and pikemen, and about two dozen of Chiefs. Dismounting, they instantly recognized each other as old brother soldiers, under the Great Captain in 1803, this Prince being Appa Saheb, the Desai of Nipani, Sir Lashkar of the Maratta Empire. He made many inquiries about the Great Duke.

In those days, the East India Company was fortunate in obtaining men of singular accomplishments for its highest offices, as we see in this journal, where Welsh records his impressions. Colonel Barry Close, the British Resident at the Peshwa's Court, dwelt in that classic garden between the rivers of Poona, where the Agent for Sirdars has his habitation. Close was a man of highly cultivated mind, kind and entertaining, and when far on in years, would ride 30 or 40 miles a day, and chase the hare and antelope. "A most capital Persian Scholar, and the best Hindustani student in the Peninsula, he transacted all his own business with the natives, by whom he was greatly esteemed." Sir James Mackintosh who stayed with him in 1808 was more struck with his practical abilities: he thought him a very superior man, mild and calm, though firm and not showy. Colonel Welsh came across three of the Governors of Bombay. The first was Jonathan Duncan, in 1805, a middle-aged man, with white silk stockings, coloured breeches, a brown coat, and his hair powdered and dressed in the fashion of 1780. Here

we have the outward man, with whom the Colonel sat down to breakfast, and whom he found kind-hearted, liberal and an excellent scholar. Again, we may compare Welsh's sketch with the hasty impression recorded by Mackintosh about a month after the latter arrived in the country. "The Governor is an ingenious, intelligent man, not without capacity and disposition to speculation. Four and thirty years' residence in this country have Brahminised his mind" and made him too submissive. Lord W.——(I suppose Bentinck is meant) is named by Mackintosh as indisputably at the head of the other genus, the sultanized Englishman, the class corrupted by despotic power. Elphinstone and Malcolm are the other two Governors with whom Welsh came in contact, who impressed and charmed him. Sir Thomas Munro was many years his friend.

The reader will find much to interest him in the tours in Travancore and Malabar, the march through Canara to Belgaum, the meetings with Ranees and Rajahs and the visit to Coorg as well as a description of the life of the civil servants at Surat Castle. In 1819, Welsh visited Anjengo, and found out the house where Eliza Draper, the friend of Sterne, was born. The surf was beating on the deserted station, the fort, with what had been a capital Government House with other public buildings, was tumbling to decay, the materials having been sold. Yet within living memory, the Chiefship of this factory was one of the highest prizes open to the Bombay Civilians. *Sic transit gloria mundi* was the Colonel's comment on the dreary shore.

With all these memories of men and things we find mingled stories of the wild animals, a panther crouching by the roadside between the fort and cantonment of Vellore, jungle dogs in a pack hunting the Colonel's hounds as he went through the forest, a large snake from whose sting the Judge of Calicut died. After an estimate of Sir Robert Rollo Gillespie, a distinguished soldier of his day, especially in Java, we learn how he started



and established the sport of spearing tigers on the race-course at Bangalore in 1810. "Discoursing one morning at Colonel Gillespie's house about the hunting of tigers, he proposed we should get one from Mr. Cole at Mysore, and hunt him on horse-back with our spears; a few of us agreed to the trial and a cage was accordingly received from Closepett, with a fine large and active tiger." A Naik and six sepoys who were sent on the ground were first floored by the animal; after which as he crouched, the gentlemen rode at him full tilt. This was the first of a series of hunts, for which Mr. Cole, the Resident at Mysore, supplied the tigers or panthers. This official brought the Maharaja to one of the race-meetings, where he held a Durbar, and afterwards made the officers a present of a fine royal tiger, for their diversion. Mr. Cole, always the leader, speared him four times, while Lieut. Aubrey pinned him to the ground by the jowl and Capt. Pepper provoked him to rise. The method and incidents of this curious tiger-baiting are given with evident keenness and relish. But the spirit pervades the narrative of wars, where the heroic bravery of divers soldiers of the native army is warmly extolled. No life was low for this active and cheerful-minded Colonel: good humoured himself, he found entertainment in all his varied pursuits. "Many a tedious hour", says he, "have I beguiled in early life, at the head of my company on the march, in listening to the bard of the corps repeating whole tales from the Arabian Nights *verbatim* in Hindustani, as correctly as our translation gives them to the wondering crowd who surrounded him." With this little story I may fittingly bring my review of these neglected volumes to an end. Let any officer wearing His Majesty's uniform, who complains that life in India is too dull for him, once peruse them in a proper frame of mind, and he will perceive that the dullness lies, not in the country, but in himself, because he fails to understand and interest his mind in the people around him, the lesson learnt in his first year at Vellore, by our gallant friend who

was launched into life without a pilot, this Colonel James Welsh of the Company's Madras Establishment.

JOHN JARDINE.

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### THE GROWTH OF DEMOCRACY UNDER VICTORIA.

THE English Constitution as finally defined in 1688 has long been the admiration of the civilized world. Nor have other countries, called on to frame new constitutions, hesitated to tender it the sincerest form of flattery by endeavouring to imitate it. France and America have both essayed thus to guarantee for themselves the liberties we enjoy, and, so far as a rigid can compete with a flexible constitution, have in some measure succeeded. One important element, however, it is impossible for constitution-makers to graft on their systems, and that is the ancient hereditary monarchy we are fortunate enough to possess. Democracy has been defined by Austin as "any government in which the governing body is a comparatively large fraction of the whole nation," and the fact that a government is called a Republic does not necessarily imply that it is a Democracy, any more than the fact that it is called a Monarchy signifies the reverse. So far indeed is this from being the case that the Constitutional Monarchy, obtaining in England, is far more democratic than the Republic, which holds sway in France. The first aim of any government should be to secure the happiness of the governed. The elasticity of our constitution enables our Government to attain this end, and at the same time to withstand shocks that have convulsed other countries, and brought untold misery on their peoples. The Government of France has been overturned nine times since the Revolution of 1789, three times by the mob, in 1792, 1830 and 1848, three times by the Army, in 1797 (18th Fructidor) 1799 (18th Bru-

maire, and 1851 (Napoleon III's *coup d'Etat*), and three times by foreign invasion, in 1814, 1815 and 1870. The Government of England has remained strong and immutable, confident in the knowledge that it has a united people behind it.

It must not be supposed, however, that there have been no changes in the working of the constitutional machine since it was first put into effective order by the Bill of Rights. On the contrary changes have been both varied and far-reaching. To begin with, though it is perfectly clear that the constitution<sup>\*</sup> was decided in 1688, it is by no means so clear that it was at once brought into effect. William and Mary exercised far more autocratic power than was ever wielded by Victoria, and William IV himself always held to, and exercised, the right to dismiss his Ministers whenever he pleased, quite independently of, and often in defiance of, the expressed wishes of Parliament. The English people were not prepared for liberty in 1688, and though in the reigns of the first two Georges the sovereign's ignorance of English necessarily threw increased power into the hands of his Ministers, when George III ascended the throne, his popularity rapidly swept away the small advantage that had been gained, and the "King's Friends" bartered the liberties of the people for the King's favour. It will be to the lasting glory of the good and great Queen, whose death we now deplore, that she accepted from the very first the role allotted to her by the constitution, and thus saved England from the throes of Revolution. "George, be king," was the maxim George III's mother was never weary of whispering into his ear, and his determination to play the part of Bolingbroke's "Patriot King" cost England her American colonies, and bequeathed to his successors a legacy of discontent and hate in Ireland it will take another century to appease. "I am determined," said His present Majesty when he was proclaimed King, "to be a Constitutional Sovereign in the strictest sense of the term," and Queen Victoria's acceptance of this principle in

days when she had no exalted Mother's example to copy, have resulted in the commanding position and lofty influence England now occupies in the councils of the world.

But I am not now concerned so much with the constitutional attitude of the sovereign as with the growth of the democratic element in our system of government, which to the political student will undoubtedly be the most prominent feature of the late reign. "*Statuo esse*," writes Cicero, "*optimam constitutum rempublicam quae ex tribus generibus illis, regali, optimo et populari modica confusa*."\* And with a sovereign possessed of such marked political wisdom and delicate tact as Queen Victoria, and an aristocracy guided by a far-seeing and statesmanlike leader like Lord Beaconsfield, this dictum would doubtless have much to commend it. But unfortunately sovereigns like Queen Victoria are exceptions rather than the rule, and the House of Lords has too often deliberately set itself against the opinion of the country to justify any reasonable hope that, if it dared, it would not do so again. It cannot therefore be any matter of surprise that the people, whose ideas of the "regale" and "optimum" genus were based on King George III and the House of Lords under the Duke of Wellington before 1832, were not prepared to entrust any part of their liberties to rulers, who had shown themselves so little solicitous of their interests. One great step had already been gained by the passing of Lord Grey's Reform Bill. The reign of personal government by the king had come to an end with the death of William IV, and the capitulation of the Lords over Reform had given a death-blow to the right of absolute veto they had hitherto possessed. But there was still much to be done. Sovereignty had been transferred to the Commons, but the Commons were still very far from representing the people. The monopoly of the aristocracy and landed classes had been broken down, but while the abolition of rotten

\* I declare that to be the best constituted State which contains a moderate fusion of the three classes, the king, the aristocracy and the popular

boroughs and enfranchisement of several hitherto unrepresented towns had admitted the middle classes to a share of the law-making power, the £ 10 household qualification for boroughs and the restriction of the county franchise to leaseholders and copyholders, still left the working classes almost entirely in the cold. "*Qu'est-ce-que le Tiers 'Etat'?*" asks Abbé Sièyes in his well-known pamphlet, "*Tout.*" *Qu'a-t-il été jus ceju' à présent dans l'ordre polit? Rien. Que demande-t-il? A' être quelquechose.\** And it is this demand of the people "to be something", that knocked insistent at the doors of Parliament at the beginning of the reign, and whose satisfaction has converted our system of government into what has been well described as a democratic monarchy. The battle was tedious and prolonged, but there are two great land-marks, which stand out in well-defined distinctness to mark its progress. The history of those land-marks,—Lord Derby's Reform Bill of 1867 and Mr. Gladstone's Franchise and Redistribution Bills of 1884-1885,—is the history of the people's victory.

As already observed the working classes had gained nothing from the Reform Bill of 1832, and they were, not unnaturally profoundly dissatisfied. Rightly or wrongly they believed that their strength had been kept in reserve to secure the passing of that measure, and that as soon as it was passed they were immediately thrown over. This feeling of indignation was aggravated by a declaration from Lord John Russell, that to push Reform any further would be a breach of faith to those who had helped him to carry it. Indignant meetings were at once held all over the country, and Chartism sprang into existence. The demands of the Chartists were in reality extremely moderate, but there was such mutual ignorance on both sides, that the promoters of the movement were for long regarded by the governing body as dangerous revolutionaries. The principal reforms embodied

in what came to be known as the "People's Charter," were Manhood Suffrage, Annual Parliaments, Vote by Ballot, Abolition of the Property Qualification for Members of Parliament, Payment of Members, and Equal Electoral Districts. Three of these have long been practically adopted, and in none of them is there anything particularly alarming. Yet when the Chartist leaders decided to hold a demonstration on Kennington Common, and to march in procession to Westminster with a petition to be presented to Parliament, the panic was such that it was thought necessary to enrol two hundred thousand special constables under the personal command of the Duke of Wellington! Happily no such precautions were necessary. The proposed procession was abandoned in obedience to the orders of the authorities, who pronounced it illegal, and any idea of employing armed force was speedily given up. Agitation has other means in England of asserting its claims, and those means were now to come to the front.

Radical members had already attempted on more than one occasion to carry measures of reform in the House of Commons, but it was not until 1858 that a Reform Bill was introduced by the chiefs of either great political party. Mr. Disraeli was then leader of the House of Commons, and the Government of which he was a prominent member, having lost ground with the country, owing to its failure to prevent the outbreak of the War of Italian Liberation, it occurred to his singularly astute mind that no *coup* would be more likely to restore its waning popularity, than if he were to take possession of the reform question for himself and his party. He therefore introduced what is called his "fancy franchise" bill. From the first it was doomed to failure. Lord Grey's Reform Bill had admitted the middle-class to legislation, but had left the working class out. What was now wanted was a measure to bring the working class in. Mr. Disraeli proposed to supply the want by giving the vote to graduates of Universities, medical practitioners and school-masters.

\* What is the Third Estate? Everything. What has it been up to the present in the governing body? Nothing. What does it want? To be something.

This was obviously completely inadequate, and when Lord John Russell moved an amendment, declaring that no readjustment of the franchise would satisfy the House of Commons or the country, which did not provide for a greater extension of the suffrage in cities and boroughs than was contemplated in the Government measure, the Ministry were defeated. Their successors at once took up the question, and Mr. Gladstone brought in a bill early in 1859, proposing to lower the county franchise to £10 and that of the boroughs to £6, and to make a considerable redistribution of seats. But Lord Palmerstone who was now Prime Minister took very little personal interest in the matter, and the force of the landed opposition was too strong to be dealt with by a half-hearted Ministry. The measure had therefore to be withdrawn, and Reform slumbered until Lord Palmerstone's death. Those who watched the signs of the time, however, noted with considerable interest a declaration by Mr. Gladstone on a motion brought forward by a private member in 1864. The burden of proving the incapacity of the working classes for the franchise, he contended, rested upon those who wished to exclude them, and not upon those who advocated their inclusion. Their demand to come within the pale of the constitution was not a concession but an irrefragible right. Henceforward the Liberal party unanimously adopted the broad principle, that "the enfranchisement of capable citizens, be they few or be they many, is an addition to the strength of the State." No surprise therefore was felt that a Reform Bill should be the first capital measure introduced by the new Government that came in after the election of 1865, in which the "great triumvirate" of Mill, Gladstone and Bright, was understood to have commanding influence. But Mr. Gladstone's bill was a disappointment. It proposed the reduction of the county franchise from £50 to £14, and that of the borough franchise from £10 to £7. After all the indignant eloquence about "unenfranchised millions," reformers were offered as a

sop the enfranchisement of a few hundreds here and there. The Conservatives who detested all reform, the Whigs who looked coldly on it, and the Radicals who advocated the "points" of the People's Charter, combined to defeat the compromise, and the Ministry resigned.

But the people were not to be put off so easily. The Conservatives and the Adullamites—as the Whig opponents of Mr. Gladstone were called—had both asserted that the working classes in general were indifferent about the franchise. Immediately the new Conservative Ministry came in, as if to shew no such apathy prevailed, Reform Leagues and Reform Unions started up as if out of the ground. The agitation came to a head in what is known as the Hyde Park Riot. The London reformers had determined to hold a mass meeting in Hyde Park, and the authorities alarmed as to what might be the consequences of an excited body of men collected in the very heart of London proclaimed it. Not to be gainsaid, the people broke down the railings of the Park and flatly refused to disperse. There were a good many little encounters with the police, and a few heads were broken on both sides. But there was nothing of sufficient consequence to be dignified with the name of Riot. Still it was evident that the people did care, and cared a good deal about their franchise, and there can be no doubt that the affair had the effect of convincing the Ministry of the necessity of an immediate adoption of the Reform principle. The speech from the Throne contained sure evidence of this conviction, and it was not long before Mr. Disraeli bore out its somewhat ambiguous phrasing by introducing first a series of resolutions, then what is known as the Ten Minutes Bill, and lastly, when he saw nothing else would meet the humour of the House and the country, the famous Reform Bill of 1867. The bill as originally introduced was very different to that which was finally passed. Its author had endeavoured to fence round the clauses for the extension of the franchise with all

sorts of ingeniously devised qualifications, to prevent the force of numbers amongst the poorer classes from having it too much their own way. but Mr. Gladstone and Mr. Bright were not to be entrapped by such ingenuous artifices, and one by one checks, balances and securities were all abandoned. The result was that the bill became eventually a measure to establish household suffrage pure and simple in the towns. It enfranchised in boroughs all male house holders rated for the relief of the poor, and all lodgers resident for one year, and paying not less than £10 a year rent, and in countries persons of property of the clear assessed value of £5, and occupiers of lands or tenements paying £12 a year. It effected a partial redistribution of seats by disfranchising certain small boroughs and giving their members, as well as those taken from constituencies that were there were over-represented, to rising towns or populous counties. And lastly it secured a sort of representation of minorities in certain constituencies, by enacting that where there were to be three representatives each elector should vote only for two candidates. No wonder the Conservative Prime Minister, amazed at his own and his colleagues' audacity, described so comprehensive and far reaching a measure of reform as a "Leap in the Dark."

Anyhow it was generally supposed that the Reform question was finally settled, and that there would be no more talk of extending the franchise. It was true that the rural population were still left without a vote, but it does not appear to have occurred to anyone either that they would be capable of making any use of one if they had it, or that they had the least desire to have one. Nor was the general idea far wrong. It was not until the formation of the Labourers' Unions under the guidance of Joseph Arch some five years later, that the agricultural labourers began to become ripe for admission to a share in the government, and that the question of their enfranchisement entered the domain of practical politics. When it did, it was at once felt

that the exclusion of the peasantry from the benefits extended to the artisan class was an unmerited hardship, and the Liberal leaders readily recognised the justice of their claim to be included in the electorate. But the last few years of Mr. Gladstone's "great administration" were too much occupied with Irish affairs to allow of the introduction of any legislative measure, and the Conservative Ministry, who succeeded it in 1874, was far too engrossed with designs of Imperial expansion, to pay any attention to anyone so insignificant as the agricultural labourer. Moreover the alarming tendency the working man had shewn to profess Liberal views had aroused the violent animosity of the landlord classes. So that it was not until Mr. Gladstone's return to power in 1880 that the question again came into prominence, and even then the difficulties inherited by the administration from their predecessors in the Transvaal and Egypt, together with the ever troublesome Irish problem prevented any legislative action until 1884. In that year Mr. Gladstone introduced his Franchise Bill, intending to follow it up with a Redistribution Bill, but the Lords objected to the two bills not being presented together as one entire scheme, and there was there fore some further unnecessary delay. A significant change however had come over the attitude adopted by the opponents of franchise extension since 1832. Then it was opposed on the ground that it would be a danger to the State, and would invite revolution and bring about "red ruin and the breaking up of laws", and the ruling class honestly believed in 1848 that the English working men, who joined the Chartist movement, were a race of selfish unmanageable communists, who, if they were allowed to have their own way would overthrow at one swoop all established securities of Society. Even in 1867 the opponents of Parliamentary reform foretold that it would place the government of England at the mercy of an anarchical mob, and of those dreadful people, who, as Mr. Lowe put it, "live in the small houses." Now,

with a few exceptions in either House, Parliament was apparently converted of a sudden into a body of persons all alike anxious for the extension of the suffrage, and only differing as to the most rapid and effective way of accomplishing the great reform! Under these altered conditions it is not surprising that a compromise was soon arrived at, and though considerable friction was engendered amongst the Radicals by the action of the Lords, both bills were eventually carried without much trouble through the two Houses of Parliament. The Redistribution Bill, while not adopting the system of Equal Electoral Districts, nor providing for the representation of minorities, removed some glaring anomalies on the basis, as far as might be, of a population scale, and the Franchise Bill put the agricultural labourer on the same footing as the artisan by extending the £10 franchise to the counties, and created what was called a service franchise for persons who were neither occupiers nor tenants of the houses they lived in. This practically established manhood suffrage, and swept away the last vestige of electoral privilege attaching to the land. The "People's Chamber" was no longer a misnomer for the Lower House, for the People had entered on their heritage.

But though it is undeniable that the ultimate sovereignty has now been transferred to the people, it is also indisputable that their authority is constantly thwarted, and the fulfilment of their wishes impeded, by the House of Lords. Nor can it be denied, to quote the impressive language of Mr. Gladstone on the last occasion that he addressed the House of Commons, that "this state of things cannot continue," or that "the question must at an early date receive a settlement from the highest authority." To tell the truth the House of Lords is an extraordinary anomaly. The great bulk of Englishmen are what is called two-chamber men, that is to say, they advocate the existence of a second chamber to check the sometimes overhasty impulsiveness of the people. But when a Conservative Ministry is in

power, the House of Lords is nothing more than a Committee of a Conservative Club, and never offers the slightest check to measures passed by the other House. On the other hand, if a Liberal Government is in office, the people have to beat again and again at the doors of the Upper House before their demands are conceded. Eventually it is true concession is never denied, but it is coming to be considered intolerable that the Lords should have the power of interfering between the representative chamber and the progress of popular legislation. The House of Lords literally exemplifies Abbé Siéyès' dictum that "if a second chamber dissents from the first, it is mischievous, if it agrees, it is superfluous," for it shewed conclusively both over the Reform Bill of 1832, which it considered revolution, and over the Repeal of the Corn Laws in 1846, which it regarded as confiscation, that it has not the courage of its opinions, and that it is therefore useless as a checking chamber, while there are countless instances—amongst them the Abolition of Purchase in the Army, the Ballot Bill, the Irish Compensation for Disturbances Bill, and the Deceased Wife's Sister's Bill—in which the obstruction of the Lords to the expressed will of the people has proved most mischievous. Even Mr. Bagehot admits in his excellent little book on the Constitution, that there is no reason why a hereditary chamber should be possessed of sufficient ability to be a good revising assembly, and that the possible usefulness of the Lords is marred by the bias they always introduce into any questions affecting the land. So far as I am aware no country in the world has so inefficient a second chamber, and there can be no possible doubt, to borrow the popular language, that the Lords must soon be mended or ended. He would be a bold man who maintained that *vox populi* is always *vox dei*, and both France and America have adopted in their constitutions a second chamber to act as a check on the popular house. In America two Senators are chosen by the Legislatures of each State for six years,

while the House of Representatives is elected by the people every two years, and in France, Sweden, Denmark, Holland and Belgium, a Senate is elected by an electorate in principle the same as that which returns the other House, but provinces, cities and communes elect Senators, while deputies are chosen by the nation at large. It is more than probable that, if the Liberal party succeed in healing their differences, and combine under a strong leader, some such Senate will take the place of the House of Lords before the century is much older.

I have now traced the growth of democracy in the late reign. It only remains to consider very briefly how far the people have proved themselves worthy of the trust imposed in them. Opponents of popular government, like Sir Henry Maine, and pessimists, like Mr. Lecky, would have us believe that democracy is inconsistent with liberty. That depends on what is meant by democracy. No doubt the government of the many, as opposed to the government of the few, may be as tyrannical and unjust as the despotism of any absolute monarch. But government by class is not democracy, even though that class be the largest in the country. Its proper definition is the government of the people by the people—the whole people. And when a nation is ripe for it—the proviso is important—there can be no doubt that the government that most nearly approximates those conditions, will inevitably result in making the country where it obtains the freest and best governed in the world. For the end and aim of every government is the welfare of the ruling class. All history has shown that it is impossible to provide against this most natural tendency, and while aristocracies have always made laws for the good of the aristocratic class, and only indirectly and mediately for the good of the people, the test of laws where the whole people have the making of them, being the welfare of the people as a whole, democracies have naturally done more than any other form of government to further the happiness of the whole

nation. No better instance of this can be given than the Repeal of the Corn Laws in 1846. It has long been admitted that Free Trade has added enormously to the wealth of the country, and has proved an unmixed blessing to the whole people. Yet because a protective duty on corn benefited the industry in which landowners were most interested, they stubbornly opposed its withdrawal, and had not their vote been swamped, and the popular vote enormously augmented, by the Reform Act of 1832, it may safely be asserted that Sir Robert Peel, sincere and honourable statesman though he was, would never have made his astonishing *volte face*, and the Corn Laws would never have been repealed. Nor is the adoption of Free Trade the only case in which the inclusion of the democratic element in the governing body has tended to an increase in the sum of the general happiness of the nation. In every department of life where abuses prevailed, and where the lot of the toiler was hard and unhappy, reforms have been introduced during the last thirty years, which have brought increased prosperity alike to the people and to their employers. Purchase has been abolished in the Army, seamen have been protected from the danger of being sent to sea in unseaworthy vessels, the employment of women and children has been prohibited in collieries and mines and their hours of labour in factories curtailed, the rights of working men to form combinations amongst themselves for demanding reasonable wages from their employers have been established, local authorities have been empowered to pull down houses unfit for human habitation and rebuild sanitary dwellings on their sites, a great system of national education has been set up, and a complete check upon municipal abuses has been provided by giving rate-payers a larger voice in the administration of their local affairs. And as a result of this torrent of reforming legislation, never was the country so wealthy and prosperous and contented.

Such is the triumphant answer of democracy to

those who foretold that, if power was entrusted to the people, they would sweep away all recognised restraints of society, and hurl themselves into a riot of revengeful class legislation. As each new layer has been added to the electorate, there has been perhaps at first a slight tendency to forget that sweet as it is to bully others, it is sweeter still not to be bullied oneself. But the people have soon learnt the great lesson of Liberty, that the true function of the citizen is the safeguarding of his own liberties, and not the manufacture of restraints on the liberty of his fellows. Hitherto they have marched steadily forward—with trifling aberrations it is true—but still steadily forward on the path of progress, and he who has faith in the destiny of the race, may look with confidence to the indefinite extension of the franchise, in the firm belief that there is ingrained in Englishmen an inherited love of justice and a consuming zeal for freedom, which will ever prevent the conception—much more the execution of any unjust or revolutionary designs. It may be that Liberty is inconsistent with Equality, and that Fraternity is but a Utopian dream, but the battle-cry of the great Revolution embodies a nobler ideal than the hysterical outpourings of the Anti-Reform party under Mr. Lowe. “The principle of true Liberalism is,” in the words of Mr. Gladstone, “trust in the people, qualified by prudence; the principle of Conservatism is mistrust of the people, qualified by fear.” To the spirit of that declaration I unhesitatingly pin my faith. The good ship Democracy has started on her course. The great Pilot who steered her so successfully through the rocks and shoals at the entrance to the harbour no longer holds the helm. But she is now well out to sea, and I am confident that she will safely carry the destinies of the mighty Empire entrusted to her charge to the still waters of lasting prosperity,

“When the commonsense of most shall hold a peaceful realm in awe,  
And the kindly earth shall slumber, lapt in universal law.”

E. LABOUCHERE THORNTON.

#### KING LEAR AND INDIAN POLITICS.\*

—o—

R. Miller appears to take for granted two propositions about Shakespeare—first, that he was infallible almost to the point of verbal inspiration, and second, that he wrote each play with the purpose of enforcing a particular moral, so that each play has its moral, and in each that moral is worked out perfectly. An important part of criticism is consequently to discover the moral of a play and to show how it is enforced by the play.

Now, this method seems to be inspired by the deepest reverence for Shakespeare, but in its application it is apt to do the poet irreparable injury as an artist, without necessarily exalting him as a moralist: for the simple reason that a play in the hands of a moralising critic is apt to be treated like a text in those of a preacher, that is, not as something valuable in itself, but rather as a peg on which to hang whatever of precept or exhortation the critic seeks to disburden himself of. Now, to my mind, Dr. Miller has treated *King Lear* and incidentally, *Cymbeline*, in exactly this way and has read into these plays a theory of Shakespeare's intention in writing them which detailed study of them does not confirm.

The moral of *King Lear*, Dr. Miller admits, is difficult of discovery, but after some discussion he decides to put it thus:—“The lesson of ‘*King Lear*’ is the absolute need of love as an active element in healthy and progressive social life.” The wording seems to suggest that Dr. Miller merely means that this is a reflection suggested by the play, and that he intends to draw illustrations of it from the play. What follows dispels such a notion. He goes on:—“For working out this thought Shakespeare naturally takes an early undeveloped state of society.” That is, Dr. Miller has so penetrated the mind of Shakespeare that he knows that the poet

\* Shakespeare's *King Lear* and *Indian Politics* by William Miller, C. I. E., LL. D., Principal, Christian College. Price one rupee. G. A. Natesan & Co. Publishers, Esplanade, Madras.



fixed upon this particular moral and wrote 'King Lear' to exemplify it.

Even the statement that the play represents an early undeveloped state of society must be received with caution. Critics have constantly pointed out Shakespeare's carelessness about anachronisms, and I believe myself that an examination of his plays *ad hoc* would show that their social and political atmosphere is always mainly English and Elizabethan, except when his authorities were sufficiently full, as particularly in the Roman plays, to afford him data for a more realistic *tout ensemble*, and that 'King Lear' is no exception. The character of the stories he used from Holinshed and Sidney gives the play the impress of the unrestrained passion of primitive times, and he has taken some pains to represent Britain as still pagan. When we come to details, however, it seems clear that Shakespeare was as usual thinking about the characters and actions of his men and women, and very little, if at all, about the society of which they formed a part. Lear's kingdom is evidently well provided with courts of justice whose procedure is that with which the poet was familiar in his own time; it has a coinage, a system of pressing for the army like that exemplified in the second part of Henry IV, archery contests, police regulations against immorality, and the practice of trial by battle in its most developed ceremonial form. The court wear gloves, use maps, and employ servants with characteristic Elizabethan vices. It is to my mind inconceivable that a poet, having as a main part of his purpose to emphasise the savagery of the times, should not have taken more pains to avoid suggesting an advanced stage of civilization.

Further, Dr. Miller says that in Britain up to the time of the play "the king has been passively obeyed, and by such obedience the nation has been held together. But the time when mere authority is a sufficient bond has evidently gone by. Men have begun to think and act and judge for themselves." I am unable to find a hint of this growth

of independence of thought in the play. Dr. Miller seems to think that certain speeches of Gloucester and Edmund in the second scene, in which Gloucester imputes the wickedness of the times to "these late eclipses of the sun and moon" and Edmund is sceptical about the influence of the stars, point to it. Gloucester has just come from court where Cordelia has been renounced and Kent banished and Edmund has just convinced him of Edgar's treachery. The speech in question may be meant to suggest that "the time is out of joint," or it may have the same relation to the actual state of public affairs as the jeremiads in last week's *Truth*, but I cannot see the slightest indication that public opinion is becoming unfavourable to despotism. Dr. Miller quotes a speech of Edmund's that occurs later in the same scene as a true description of the state of things, which is obviously again a piece of "chaff"—Edmund saying that the effects predicted of the eclipses are coming to pass and Edgar twitting him with being "a sectary astronomical." It is apparently on these grounds that Dr. Miller says "Plainly, not very much remains of the divinity "that doth hedge a king." An attempt on the king's part to rule by bare force would obviously be futile, neither would it be right to resort to it even if it might perhaps be superficially successful."

Even, however, granting that these passages mean what Dr. Miller thinks they do, and that Edmund and Gloucester are aware that political change is necessary and that government by force would no longer "be right" is there any hint that these are Lear's views? Dr. Miller is confident that they are, and proceeds to explain why Lear contemplated that division of his kingdom on which the play turns.

The improbability of the Lear story is obvious enough and Shakespeare's best defence for founding a play upon it is the splendour of his achievement. This is not enough for Dr. Miller. Shakespeare, being infallible, cannot have used an improbable story. What seems the half insane

whim of the old king had really a deep political purpose which only missed its effect through the king's hastiness.

"Partly from an old man's weariness of the cares of state," he writes, "partly from the feeling that the new age that is coming on presents problems which require to be dealt with by fresher minds, the king has resolved to abdicate. His arrangements for the future government of the kingdom are determined, not only by his having three daughters, but by the feeling that the circumstances of the age require that the rulers shall come nearer to the ruled. He feels that it is an age of transition. He feels that the society which he has long directed is developing, and accordingly that the Government it needs must become more complex. Something will be done to meet the difficulties of the new age if each ruler is made to rule over a smaller area, with which he can make himself more intimately acquainted and for the wants of which he can therefore more minutely care". . . . . "He feels that the need has come for a higher style of rule than has ever been. He feels that of such rule the prime essential element is detachment from self, altruism, devotion to something beyond one's own feelings or one's own interests. We may call it by what name we choose. The highest name for it, and Shakespeare's name for it, is—Love. The thought strikes the old king that he will emphasize this need for love in those who rule. He will make his devolution of authority depend on an assurance that this unselfish principle is strongly at work in those who are to come after him as rulers."

So far I have thought it necessary to quote in order to avoid any risk of misrepresenting Dr. Miller's main idea. He pursues it at some length and the gist of what follows is that Lear, being "in advance of his time" and recognising "the deepest want of his time" determines to divide his kingdom among his daughters, proportionately to their love for him, in the expectation that their husband's rule will be proportionately altruistic or "loving." Now I do not hesitate to say that there is no syllable in the play on which this theory of Lear's intentions can be founded. The old king expresses his motives with the greatest simplicity.

"'tis our fast intent

To shake all cares and business from our age;  
Conferring them on younger strengths, while we  
Unburden'd crawl toward death

\* \* \*

We have this hour a constant will to publish  
Our daughters' several dowers, that future strife  
May be prevented now." (I. 2)

There is no suggestion here or elsewhere that the "younger strengths" are to rule in a new spirit or that the kingdom is to be divided with a view to decentralisation and increased efficiency of Government. The king regards the kingdom as his property, it is to be divided to form marriage portions for his daughters. "The more opulent third" he would give over, in complete disregard of national feeling, to the foreign dominion of France or Burgundy. No ideas that can properly be called political, beyond the avoidance of strife, are suggested in the remotest possible manner, and it does not occur to any one to question the king's absolute right to arrange everything as he pleases. Kent protests against the king's decisions in the king's own interests, but dare not openly disregard the sentence of banishment or death. Lear is "every inch a king" then, as in his frenzy, and throughout the play the sole conception of government in the poet's mind is absolutism, pure and simple.

Dr. Miller seeks to support his view by the contention that in "Cymbeline" we have a kind of sequel to "Lear." "It sets forth" he says "the state of matters when some generations have gone by, the state of matters which we may presume that Albany has been chiefly instrumental in substituting for the political and social condition which was becoming outworn when Lear was king. In "Cymbeline," everything is comparatively calm and regular. The king has still great power, but others also have their influence and take an orderly and fitting part in all affairs that touch the welfare of the community." "Cymbeline" is, of course very unlike "Lear." It is a melodrama, and a very stagy one too, and were it not for the exquisite beauty of the romantic part of the story with the characters of Imogen and her brothers and Leonatus, and some passages of unsurpassable poetry, would well deserve the condemnation Dr. Johnson pronounced on it.

The contrast between vice and virtue is even more strongly marked than in "Lear." Cloten's revolting bestiality finds no parallel in that tragedy. Imogen is another, but flawless, Cordelia. Iachimo outdoes Edmond in scheming villainy, and the Queen is no more "loving" or "altruistic" than Regan or Goneril. There is in fact no indication of an improved state of public morals.

If any reader gets an impression of the kind from the play, it is merely because Shakespeare, following his authorities, and probably in the softened mood of his declining years, has forced it into a happy ending by lavish use of the stalest theatrical devices. Possibly in Cymbeline manners are more refined and life more luxurious. The political system of Britain, however, is represented in the two plays in an absolutely identical manner. Cymbeline is an absolute monarch like Lear. He pronounces sentences of banishment and death and accompanies them with personal abuse, just as Lear does. It is true that he falls under the evil influence of the Queen and Cloten. This, however, is only personal and incidental. It has nothing to do with the political system. There is no hint of any British Lord venturing an opinion, till Belarius discloses himself, when he talks to Cymbeline in just the tone that Kent uses to Lear. There is a hint, I must admit, that Cymbeline realises the real dependence of even the most absolute king on his people. He tells Lucius that even if the king yielded to the Romans the Britons would not. Lear would hardly have so spoken, but the difference is in the men not in the institutions nor even in the tone of popular feeling and, indeed, the end of the play shows that Cymbeline was merely "bluffing."

I have only followed Dr. Miller through the first part of his comparison of the two plays. He is of opinion that by carrying this line of enquiry further "a most instructive study might be made of the views of Shakespeare concerning the ends for which society exists and the conditions on which alone it can both shun destruction and

maintain health and usefulness as it progresses from stage to stage." I dare say this is true enough in so far as it means that it is only by the comparative study of his writings that any conception of Shakespeare's social and political philosophy can, if it ever can, be arrived at. The position that Shakespeare, because at different times he took stories from two different epochs of British history, meant by exhibiting the changes that political and social institutions had undergone in the interval between them, to shadow forth the laws of such development and the ends and means of social existence, requires proof. Dr. Miller has put forward no such proof and my own comparative study of "Lear" and "Cymbeline" has left me no hope that further 'prosecution of it would lead to any such result as he anticipates.

I will not weary the readers of this *Review* with further detailed criticism, though there are other points that might be touched on. I have treated Dr. Miller's book simply as a piece of Shakespeare criticism because I was asked so to do. It has another aspect to which I think ample justice has already been done in the press.

J. H. STONE.

— o —  
THE SONG OF NURJEHAN  
IN PRAISE OF HER OWN BEAUTY.

(*From the Persian*).

When from my cheek I lift my veil,  
The roses turn with envy pale,  
And from their pierced hearts, rich with pain,  
Send forth their fragrance like a wail.

And, if perchance, one perfumed tress  
Be loosened to the wind's caress,  
The honeyed hyacinths complain,  
And languish in a sweet distress.

And if I pause still groves among—  
Such loveliness is mine—a throng  
Of nightingales awake and strain  
Their souls into a quivering song.

MUTHYALA SAROJINI NAIDU.

## Recent Fiction.

—o—  
ELEANOR BY Mrs. HUMPHRY WARD

(Macmillan &amp; Co.)

This is a tale of Anglo-Italian life. Edward Manisty, a high bred, highly-cultured English politician, breaks with the party to which he ancestrally belonged on the ground of difference of views in matters relating to religion and education and throwing up his office goes to Italy to escape the frictions and agitations which his conduct brings upon him. Here he throws himself into a passionate and most hostile study of New Italy—of Italy made by revolution and the lay modern spirit. He writes a book; and Eleanor Burgoyne, a cultured cousin of his, collaborates with him. She had suffered the heavy misfortune of losing her husband and her boy simultaneously; and the intellectual companionship with Manisty not only soothes her grief and makes life bearable to her, but also sows in her mind the seeds of a passion whose growth and expression form the central point of the story. Lucy Foster, a New-England girl of Puritan training, is their guest. Manisty, at first rude in his behaviour to the girl, gradually feels her beauty grow upon him; and poor Eleanor assured by the early neglect of Lucy on the part of Manisty of her place in his heart, dresses her to advantage. Manisty hardly knew till then that Lucy was so beautiful; nor Eleanor that she had created her own rival; and the Fates smiled at what she had done.

Manisty's book gives him trouble. Some parts of the book which were inspired by his fair collaborateur collapse under the criticism of a friend. An intellectual distress comes over him in consequence of which he avoids both work and companionship. He now seeks the company of Lucy; and a tenderness grows up between them. Two perils for Lucy out of which Manisty helps her develop the situation; the tenderness ripens into love. Eleanor the erstwhile friend of Lucy now stands forth her confessed rival, burning with jealousy and determined that Lucy shall not win what she has lost. In a fit of uncontrollable jealousy Eleanor accuses Lucy of snatching away from her, her heart's most precious possession. Simple minded child-like Lucy believes herself guilty and is henceforth entirely in the hands of her scheming jealous unscrupulous rival. They both abscond to a hill-station leaving Manisty in the dark about their movements. Father Benecke, a priest, who is suffering excommunication for heretical opinions and who happens to live close by Eleanor and Lucy at the

hill station is a friend of Manisty's. He contrives to give Manisty news of them and he arrives at once. Meanwhile, Eleanor struggles with her jealousy. Manisty, Eleanor and Lucy meet and a truly dramatic situation and its unfoldment henceforth take hold of the reader's attention. Eleanor, by contact with the lofty sorrows of Father Benecke, learns the wisdom of self sacrifice; and the jealous hinderer is transformed into the active helper.

Such is the bright story written in the style characteristic of Mrs. Ward. We miss the diffuseness of Robert Elsmere; but the grace and beauty of diction remain intact. Mrs. Ward writes throughout with a restraint which comes of maturity. Manisty, gifted, egotistical, who could be a bear or an angel as he liked lacks individuality and clearness of outline, as does also Lucy, the unsophisticated girl, whose mind is too immature to grapple with the situation into which she is plunged. Eleanor caught in the coils of jealousy and vainly endeavouring with all the strength of her rich nature to free herself is a masterly sketch and a firmly drawn character which betrays the femininity of its authorship. The story is engrossing and Mrs. Ward has produced a novel not unworthy of her reputation.

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VANITY BY RITA,  
(Fisher Unwin).

This is a notable work of fiction which may be commended to those desirous of obtaining an insight into the world of fashion and extravagance, whose *petits secrets* are here related by a *court modiste*. Of plot or situations murky with horror or characterised by passion and romance the work is innocent, although it embodies a love story of singular interest and pathos, dramatically told. 'Vanity' will be read for the sake of its outstanding merit, which is the simple yet masterly manner in which the follies of fashion are described. The American beauty who remains a vulgarian in spite of her millions; the aristocratic dowager who has outlived her charms but who has not outgrown her passion for smart, up to date gown, the social 'star' who is 'in' everything worth being in, all these petty queens of society and their follies are here described with a fidelity and attention to illustrative detail which must be pronounced to be simply masterly. We take the following description at random.

"She was the most noted and the most quoted of celebrities at home, and the *Post* and the *Court Circular* and the *World* and various smaller luminaries of the Press always had her name in their

social columns. How she managed to be everywhere and do everything; to ride, golf, skate, dance, drive and dress as she did was one of those marvels, fashionable women daily present to the world they rule. But there was no denying she was a great power. Her terrible extravagances and her load of debts had never cost her a wrinkle, or an anxious hour. Her set adored her. Her nod and smile were the hall-mark of approbation for which no sacrifice was too great. Even when an irate dress maker had had the audacity to sue her husband for a bill his wife had ignored, and Mrs. Jackey had to appear in a public court to be confronted with the extravagant details of her toilettes, her hold on popularity did not suffer. Mr. Jack Beauchamp was pronounced a brute and a miser and utterly undeserving of so wonderful a wife. The wonderful wife went to other dress-makers and ran up still more extravagant bills, and left her lord and master to the world's opprobrium and the solace of other injured or martyred husbands." No more interesting and readable work has yet been written on the text, "Vanity"!

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*PREJUDGED, by FLORENCE MONTGOMERY*  
(Macmillan & Co.)

A simple and pleasant love story, although it scarcely justifies its existence in the form of a volume of close on three hundred pages. The tale treats of a bright young English girl, Blanche Talbot, who has been invited as a companion by her friend and chaperon, Lady Mary Fihroy, to visit a foreign watering-place and who looks forward with delight to the change abroad and the making of many new friends. The reality is disappointing. At the *table d'hôte* she meets, what she mentally terms, very "second rate" people, the only Englishman of the party being a very talkative young man who has a habit of "holding forth" to his neighbours, but whose ceaseless stream of conversation nevertheless amuses and interests them, and even her friend Lady Mary is attracted. Blanche whose life had hitherto been in somewhat of a groove is a very exclusive young lady, and her impression of the stranger who among his other failings wears large blue goggles and walks with a peculiar gait almost amounting to a limp, is decidedly the reverse of favourable. His unfailing good humour and sunny disposition eventually overcome her prejudices and she learns to appreciate his great worth. To her surprise and pain, she discovers also that his physical injuries were the result of an accident caused by her brother's carelessness; and that a brilliant future in the

diplomatic service was thus marred for ever. Her shame and humiliation at her hasty and ill-considered judgment may well be imagined. The characters are sufficiently life-like and the reader unconsciously sympathises with the heroine in her love troubles which, however, terminate happily.

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*A WOMAN'S BURDEN: by FERGUS HUME*  
(Jarrold and Sons.)

We have gone through this novel of which an advance copy has been sent to us by the publishers, with some care, and have no hesitation in pronouncing it to be a very successful effort and fully calculated to sustain the talented author's reputation as a faithful delineator of the seamy side of human life. We have an idea that the work before us is an attempt to strike the golden mean between conventional sobriety and piquant realism in this department of literature. The author has certainly succeeded in achieving this whether it was his conscious aim or not. The story is neither complex nor full of thrilling incidents, but in its own way it is excellently told, and holds the reader's attention breathless to the end. The heroine Miriam Crave, is by no means one of the ordinary type of the society Goddess: indeed, in the bearing of the burden, which is hers for the best part of her life before she is lost to us in the unromantic, albeit inevitable, end of 'married and lived happily ever afterwards,' she stoops so far as even to steal a will and secrete it away with the remarkable object of saving from a headlong course to ruin the man who really inherits a valuable estate under the will. A conflict of duties is ever the agony of righteous souls, and Miriam's choice of a plain misdeed for the achievement of a greater good,—the saving of a pitiful life from being ruthlessly shipwrecked by a career of aimless dissipation—results with true poetic justice in not bearing the fruit for which she so nobly sinned, besides making a havoc of her life and fond ambitions.

Such is ever the result of crime, and the moral of the life-struggle so vividly and pathetically depicted in these pages appears to be that we, frail mortals, are utterly in the wrong in attempting to palliate a plain transgression by the search after a greater good. Whatever the motive, sin is ever bound to be fruitless. Miriam out of sheer pity which she imagines to be love, marries Gerald Arkil, the man she has contrived to keep out of his rightful heritage, with the one object of saving him from his evil instincts. As it proved, however, the attempt to reclaim Gerald into a self-respecting individual earning his living was a sad failure. He is powerless in the

struggle against the corrupting seeds congenital in him, and goes on yielding to his worse nature. He is on the brink of ruin, when utter demoralization sets in by the accidental discovery of the lost will. He discards his wife at once, and enters with a truly awful rebound of pent-up energy in a career of profligacy with a mate similarly disposed who had been his first love and who had rejected his suit when she had found out that he had been disinherited by his uncle. The rest of the drama is played out with almost frantic haste. Gerald and his partner soon quarrel, and the end soon comes for Gerald as it had been planned for him by his wicked uncle Barton, who had only devised the estate to him with the avowed object of ruining him, body and soul. His partner also disappears into further depths of degradation, in which she might well have been left by the author without the feeble attempt made in the last chapter to give her a relapse into some sort of respectable life. This is the essence of the plot, though the 'burden' which gives the title to the story, is that of her ruffian brother 'Jabez Crave' borne by Miriam, as few would have felt called upon to bear. But this is after all only a side episode which helps but to develop the character of the heroine, and it is impossible within the brief limits of this review to attempt any sketch of the various ramifications of the plot. All these however are very well-balanced and fitted in harmoniously with the finish of a practised hand in the work under review. In short, the book before us amply repays perusal and combines enthralling interest of plot with sound and mature thought and faithful delineation of nature. As might naturally be expected, the various characters are typical productions who breathe with full life and vigour. They are very cleverly developed with rare insight of human nature in all its aspects. Some of the minor characters especially are simply perfect in their way, and by no means mere puppets who weakly minister to the exigencies of the story. Mrs. Darrow, we cannot refrain from specially singling-out, as a happy improvement in a special way of our old friend Mrs. Grundy. At the close of this brief review, we can only refer to the fact that a whole world of moral and sociological problems is raised in the book under review, which will afford ample food for reflection to the thoughtful reader.

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MARSHFIELD THE OBSERVER by Egerton Castle.  
(Macmillan & Co.)

Powerfully written studies of character and action. The volume contains five stories and a second and distinct part entitled "The Death Dance." Two of the five stories, any one of which by itself

would provide the theme for a fully developed romance, deal with psychological phases of life in which the individual concerned, owing to a neurotic and hysterical condition of the mind, apart from actual disturbance of mental equilibrium, is led into a course of action, which in its normal condition his mind would revolt at. These two stories, though well written, are wanting in finality, while the remaining three are more or less dramatic in tone and movement and will repay perusal. The best of them seems to us to be "The Guests of the Wolf Master." Of the various characters in the book, that of Marshfield, a cold, dispassionate and speculative individual, a moral anatomist who regards his associates as interesting presentments of psychological phenomena, is the most clearly limned, and his personality is unquestionably striking. The story of "The Death Dance" a ghastly but a true incident of the Home Rule War of 1849 is related with much dramatic force and skill.

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THE LIFE & DEATH OF RICHARD YEA & NAY  
Maurice Hewlett.—(Macmillan & Co.)

Like its predecessor the *Forest Lovers* which won for its author a high place in the world of fiction, this also is a mediæval romance of uncommon beauty. Richard Cœur de Leon, nicknamed Yea-and-Nay from his habit of blowing hot and cold, takes hold of your imagination at once and commands it to the end. His strength and sternness, his undaunted prowess and his whole-hearted devotion to the high souled purpose of his life are traits which are drawn with such admirable force and clearness that you can't withhold your sympathy from this sport of fate, the Anjevin devilry in his blood notwithstanding. Jehane the ruler of his destiny, is a neurotic girl with sea-green eyes and golden hair, who stalks before you, pale-faced, a problem in flesh and blood, a veritable sphinx. She is somewhat over-human, an eerie personality a little too overdrawn, even for a mediæval romance. The low sun makes the color, said Guinevere, and it has application to this strange creature of fancy. Scenes of intense passion unroll rapidly before your eyes; the action is quick, making the air heavy with the scent of blood and the clang of arms. The story is told in picturesque style of considerable verve and terseness. Here and there a tendency to mannerism is apparent; now and then the peculiar turn and trick of expression irritates you; but its singular charm excuses all. Richard Yea and Nay reveals the skilful hand which drew the "Forest Lovers and we sincerely hope that this is not its last.

### ELECTRICAL WAVES AND WIRELESS TELEGRAPHY.

THE object of science is to replace experience, to reproduce and anticipate in thought the facts of sense-experience. While remaining within the province of sense-experience, science hastens beyond that province constantly expecting its judgments to be confirmed or reversed. This is effected by comparison. Memory is always ready to point out resemblances between new facts and facts already known. The result of the comparison finds its expression in description. This description may be either direct or indirect. When all the features common to the varied facts of any particular province of experience are summed up in a simple concise statement, we have a direct description. All laws of nature are descriptions of this kind; for example, all possible cases of refraction between any two media are summed up in the well-known law of the sines. But often the direct description of the facts of a province of experience becomes difficult. We then try to simplify matters by comparing the facts of one province with those of another; thus the motion of the moon becomes intelligible by treating it as a heavy body falling towards the earth; the behaviour of a magnet by considering it as charged with fluids; the phenomena of light by treating it as a wave motion; and so on. Any such description of one province of facts by comparison with the already formulated description of another province, we call an indirect description or theory. As description pre-supposes the interdependence of the elements described, it enables us to complete in thought facts which are only partly given in sense-experience, and thus opens out paths for further inquiry. If more than one indirect description of the facts of a province be possible, then to decide between them we appeal to experience, that is to say, we see how far the gaps filled up mentally by the rival theories are confirmed by experience. The more description of each province of facts by itself either directly or indirectly does not give us complete satisfaction. We aim at something more; we desire to attain a point of view whence we can see the same familiar facts in every province of experience, to arrive at a unitary conception of the universe, a presentment of facts which is the completest possible but at the same time involving the least expenditure of mental labour.

It was in the attempt to arrive at such a unitary conception of natural phenomena that Faraday discovered interesting relations between optical, electrical, magnetic and chemical phenomena. These

interesting relations led him to doubt the possibility of any kind of direct action between bodies situated apart from one another. Consistently with this idea Faraday had to suppose that electrical and magnetic forces produced their effects at a distance not directly but through the intervention of a medium in which their effects were propagated from point to point. By developing these ideas to their logical consequences and following them up with experiments, Faraday made his grand discovery of induction of currents. It is this discovery that has rendered possible all the recent great developments in theoretical physics as well as in electro-technics. Had it not been for induction currents we should not have been enjoying the benefits of electric telephony, electric lighting, electric traction and electric transmission of power. And it is this discovery of Faraday that has opened out new and fruitful paths of investigation, which have up to the present taken us to Röntgen rays, electrical waves and wireless telegraphy.

The phenomena of current induction discovered by Faraday are as follow: When a magnet is moved towards a closed coil of wire there is evoked in the coil a sudden electrical current lasting only for the moment of approach, but when the magnet is withdrawn from the coil a similar momentary current flowing in a direction opposite to the first is produced (Magneto-induction). Similar momentary currents are produced in a closed coil also by moving, instead of a magnet, another closed coil conveying a current, or even by keeping the latter coil stationary and making a current alternately appear and disappear in it, or even by varying, that is, increasing and diminishing the strength of the current flowing through it (Voltaic induction). Lastly sudden momentary currents are generated in one and the same coil, whenever currents begin to flow, or cease to flow through it, or only have their strength altered (Self-induction). Currents produced by any of these methods are called *induction currents*.

Any apparatus by means of which we can by employing ordinary currents such as those from a voltaic battery obtain induced currents rapidly varying in direction, is called an *induction coil*. The essential parts of such an apparatus are (1) a core of soft iron; (2) a primary coil of a few turns of thick insulated wire enveloping the soft iron core and receiving an ordinary current, which by means of a mechanism called the *interrupter* is made to appear and disappear alternately in rapid succession; (3) a secondary coil of many turns of thin insulated wire enveloping the primary. Whenever a current makes its appearance in the primary coil a momentary current flowing in a direction

opposite to that in the primary is set up in the secondary, and whenever a current disappears in the primary a momentary current flowing in the same direction as that which has ceased to flow in the primary is induced in the secondary. Thus currents flowing in rapid succession alternately in opposite directions are generated in the secondary coil. These induced currents, though of very brief duration, possess a high tension and are capable of producing remarkable physical and physiological effects.

Though Faraday made many remarkable discoveries in trying to demonstrate his views as to the nature of electrical and magnetic action, his views found little favour with physicists of his day. To justify the acceptance of Faraday's ideas it would need to prove that time was required for the propagation of electrical and magnetic effects. When an electro-magnet is suddenly excited, if its effects at a distance are produced through the intervention of a medium, then these effects must first become manifest in the neighbourhood and then at a distance. Similarly when rapidly alternating currents are produced by means of an induction coil, the rapid variations in electrical force should, if its effects are propagated through a medium, produce their results first in the neighbouring parts of surrounding space and then in the more remote parts. Though Faraday attacked this question incessantly, he was not able to produce any experimental confirmation of the logical consequences of his ideas. On the other hand the apparent production of effects by electrical and magnetic forces at all points of space simultaneously lent support to the electro-dynamic theory then in vogue. Hence Faraday's views, however comprehensive and far-reaching they might appear to us, remained unnoticed and bore no fruit for a long time.\*

The first to recognise the full significance and fruitfulness of Faraday's ideas was James Clerk Maxwell. His attention was drawn to these ideas by an unexpected coincidence. In measuring the ratio of the unit of electricity arrived at by electrostatic methods of measurement to that obtained by electro-magnetic methods, Maxwell found that this ratio was measured by a velocity and that the value of this velocity, which oscillated around 300,000 kilometres\* per second, was nearly identical with the velocity of light. In view of the variety of methods employed in measuring this ratio and the great care and precision with which the measurements were made by

himself and other physicists, Maxwell could not attribute this coincidence to mere chance, and had therefore to assume the existence of some intimate relationship between optical and electromagnetic phenomena. Moreover, though the fact of the ratio of the two units of electricity being measured by a velocity might have been accounted for on the electro-dynamic theory, according to which that ratio would represent the velocity with which an electrical disturbance travelled through a perfect conductor free from every kind of resistance, there was yet no means of explaining on that theory why this velocity should be identical with that of light, which, while easily travelling through non-conducting media such as glass or air, does not travel through metallic conductors. Maxwell therefore accepted the views of Faraday which described known facts better than the electro-dynamic theory, and gave them a precise shape in his highly ingenious electro-magnetic theory of light.

According to this theory light is an electro-magnetic phenomenon. Whenever light travels through a transparent medium, such as air, glass, &c., the medium is the seat of electrical disturbances. These electrical disturbances consist of displacement currents which change their directions about a quadrillion times a second. The enormous induction due to these rapid alternations produces other currents in the neighbouring parts of the medium, and in this way the luminous wave is propagated from point to point. Calculation shows that the velocity of propagation is equal to the ratio of the two units of electricity, that is to say, to the velocity of light. These alternating currents on account of their periodic character may be spoken of as electrical oscillations; but are these oscillations longitudinal like those of sound or transversal like those of light in Fresnel's theory? In the case of sound the air suffers alternately condensations and rarefactions. On the other hand in the case of light the medium, the luminiferous ether in Fresnel's theory, behaves as if it consists of incompressible layers only capable of gliding over one another. Now if there are open currents, as the advocates of the electro-dynamic theory suppose, the electricity flowing from one end to the other in each of these displacement currents should accumulate at one of the extremities; then there would be condensations and rarefactions as in air, and the oscillations would be longitudinal. But if there are only closed currents, as Maxwell supposes in his theory, this accumulation would be impossible and electricity would behave like the incompressible ether of Fresnel and its vibrations would be transversal.

\* A kilometre is nearly five-eighths of a mile.



The superiority of Maxwell's theory over the older theories lies in its greater comprehensiveness. While the electro-dynamic theory attempts to bring the facts of magnetism within the province of electricity, and the wave theory of light tries to connect together the phenomena of light, radiant heat and ultra-violet radiation, the electro-magnetic theory goes farther and seeks to show that the province of optics is included within the province of electricity, and that the fundamental laws of the former are identical with those of the latter. Despite its comprehensiveness and consequent seductiveness the electro-magnetic theory found for a long time little favour in the eyes of physicists. In order that physicists may accept a theory it is not enough that there are no known facts contradictory of the theory. Of a given set of facts, as pointed out in the beginning of this article, more than one theory may be possible. To validate one theory and invalidate the rest there should be some experimental confirmation of the logical consequences of that theory, and this experimental evidence should be such that it is contradictory of the logical consequences flowing from the rest. Such experimental proof Maxwell could not furnish, and his theory had therefore to wait twenty years before it could find acceptance.

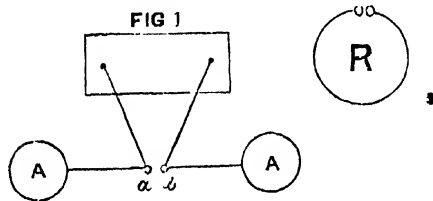
The furnishing of the experimental evidence necessary to confirm Maxwell's theory is the immortal service rendered to science by Heinrich Hertz. This gifted investigator did not live for more than thirty-seven years. Yet in that short period he made some of the most important discoveries and opened out wholly new paths of inquiry in physics. He demonstrated experimentally the undulatory character of electrical force and showed that rays of electrical force travelled according to the same laws as rays of light. His investigations on electrical oscillations, which have spread his fame over the whole scientific world have been brought together in a special book. In the introduction to this book Hertz gives us an insight into the workings of his mind, whereby he was brought to his great discoveries; he tells us not only his successes, but also gives an account of his temporary failures. We possess few such records of the "psychological history of science" and as such this book will form for all time one of the most valuable treasures in the literature of physics.

We have seen that according to Maxwell's theory light is due to a series of alternating displacement currents. These displacement currents are unlike ordinary voltaic currents. While the latter flow through metallic conductors, the former traverse insulating media, such as

air, glass, vacuum &c. To take an example, when we connect the two poles of a voltaic battery by means of a wire, we have an ordinary current flowing in the wire, which past electricians spoke of as a closed current; but if, instead of connecting the two poles directly, we put them in communication with the two armatures of a condenser, say the coatings of a Leyden jar, there is an instantaneous current lasting only till the condenser is charged, which in the view of past electricians was arrested at the surface of the armatures and was therefore called an open current. Maxwell however denies the existence of open currents, and considers that in the latter case the current traverses the insulating plate of the condenser as a displacement current. Further, these displacement currents in insulating media should according to Maxwell produce, if their alternations are sufficiently rapid, effects in surrounding space similar to those of currents in metallic conductors, that is, they should manifest their presence either by their thermal effects, or by their action on magnets and currents, or by producing induction currents. Hertz has furnished proofs of these consequences of Maxwell's theory.

We can easily produce rapid electrical oscillations by the discharge of a charged Leyden jar. The duration of the spark of discharge of a charged Leyden jar is very brief; it amounts according to the experiments of Wheatstone to something like one-twenty-four-thousandth of a second. But the discharge is not instantaneous; on the contrary, as was shown by Helmholtz on purely theoretical grounds it is oscillatory, that is, the whole discharge consists of partial discharges following each other in rapid succession but flowing in opposite directions. The correctness of the theoretical conclusion of Helmholtz was experimentally established by Feddersen, who studied the spark of a Leyden jar by means of a rotating mirror and resolved the whole spark into a series of small separate sparks flying backwards and forwards in rapid succession. The partial discharges are all of equal duration, but the duration of each single partial discharge is much less than that of the whole discharge. The duration of each individual partial discharge depends upon the capacity of the jar, and when the capacity is small, the duration is about one-millionth of a second. Now according to theory electrical oscillations are propagated with the same velocity as light, and the velocity of light is about 360,000 kilometres per second; hence in one-millionth of a second electrical oscillations would traverse a distance of three hundred metres. It is therefore evident that the propagation of such rapid electri-

cal oscillations as are produced by the discharge of a Leyden jar could not be rendered manifest within the limits of an ordinary laboratory. To make this possible the first thing to do is to produce electrical oscillations which succeed each other so rapidly that their wave-length in air may be conveniently measured in a large and wide room. Hertz solved this problem. He showed that under suitable conditions discharges between conductors in open circuit yield oscillations of much shorter period than those obtained by the discharge of a Leyden jar. For example, if we connect two straight wires ending in spheres with the poles of the secondary spiral of an induction coil, whose primary is excited by a suitable battery, the sparks of discharge between the knobs *a, a* (Fig 1) generate oscillations



whose period is about one-hundred-millionth of a second, and decreases as the capacity decreases, that is, as the dimensions of the metallic parts of the conductors *aA, aA* decrease. In order to obtain oscillations of not too small period we can increase the capacity of the wires by attaching larger spheres *A, A*, to them.

Any arrangement of the above kind by means of which rapid electrical oscillations, or Hertz's oscillations, as they are often called, may be produced and maintained constant, is called an electrical oscillator or vibrator. Many forms of oscillator have after Hertz's discovery, been invented. The essential parts of all these forms are the same, and consist of (1) two extreme conductors of relatively large capacity, which are at first oppositely charged and have their charges interchanged in every half oscillation; (2) an intermediary thin conductor by which electricity can pass from one extreme conductor to the other; (3) a spark gap in the middle of the intermediary conductor; (4) a powerful induction coil whose poles are in communication with the extreme conductors. In his early experiments Hertz employed two spheres of fifteen centimetres radius as extreme conductors, while the intermediary was a straight wire of hundred and fifty centimetres. In his later experiments he replaced the spheres by square plates, and in his small oscillator he altogether dispensed with the extreme conductors, and reduced

the length of the intermediary conductor to thirty centimetres. The object of the induction coil in an electrical oscillator is to impart to the two parts of the oscillator their initial charges and make good the energy lost. On account of these alternately opposite charges on the two parts of the oscillator, the medium surrounding it becomes the seat of electrical disturbances. Whenever the charges on the two parts rise sufficiently high a spark pierces the spark gap and it is only then that electrical oscillations are generated in the wire. These electrical oscillations are propagated through the surrounding medium.

Now the question is, how is the presence of electrical oscillations in the medium surrounding an oscillator to be made evident? We possess no special organ by which we can detect electrical waves, just as we can light or sound waves. Nor can such instruments as galvanometers which we employ for the detection of ordinary currents and even alternating currents of sufficiently long period be of any use when we have to deal with such rapidly alternating currents as give rise to Hertzian oscillations. Hertz found a solution also for this problem by the discovery of his electric resonator. We know that the vibrations of one sounding body are under certain conditions capable of communicating their energy to another sounding body and making it resound. For example a vibrating tuning fork imparts its vibrations to the surrounding air, and if there is in the neighbourhood another tuning fork tuned to the same note, it is set in sympathetic vibration and emits a note. Similarly when an electrical vibrator produces induction phenomena in the field surrounding it, it generates electrical oscillations in a second oscillator placed in this field, provided that the periods of the two agree. The second oscillator then acts as an electric resonator. In using an oscillator as a resonator we no longer need an induction coil, as the effects we desire to produce in the resonator are those of the field and not of the coil. The resonator may be identical with the oscillator or it may have an entirely different form provided that the resonator satisfies the same conditions as regards certain physical quantities as the vibrator does. The resonator employed by Hertz consisted of a wire bent into the form of a circle and ending in two small knobs very close to each other, but not in contact. (*R* in fig. 1 above).

If such a resonator is placed in the neighbourhood of an oscillator at work, we observe a series of sparks passing between the knobs of the resonator. These sparks caused by the variations of electric force in the field diminish as the reso-

nator is moved farther and farther away from the vibrator. These sparks are produced even when we interpose between the oscillator and the vibrator an insulating solid partition such as a wooden or masonry wall. But the action ceases if the partition is conducting. In this case, however, we observe if we move the resonator between the oscillator and the partition that at some points the spark ceases to appear and at others it is reinforced. These extinctions which occur at intervals of equal length prove that electrical forces are propagated in the manner of waves which are capable of being reflected by a conducting partition, and these waves reflected by the partition interfere with the incident waves and give rise to stationary waves, of which the nodes are the places of extinction and the middles of ventral segments the places of reinforcement. The distance between two consecutive nodes corresponds to half the length of a wave. In one of his experiments Hertz found that the distance between two consecutive nodes amounted nearly to 4.8 metres, the time of oscillation calculated from the dimensions of the instrument being  $3.1$  hundred-millionth of a second. From this it follows that velocity of propagation of electrical waves is 310,000 kilometres per second, a value which agrees with the velocity of propagation of light.

By means of his small oscillator already referred to and with the aid of a parabolic reflector designed to concentrate the electrical waves in a definite direction and thus produce better effects, Hertz arrived at a number of very interesting results. The reflector consisted of a sheet of zinc bent on a frame work of wood into the form of a cylindrical surface having a parabolic section. Such a mirror has for its focus a line instead of a point. If we place a small vibrator with its axis coincident with the focal line of such a mirror, the electrical waves are propagated in the direction of the plane of symmetry of the reflector, and they affect a resonator at distances much greater than before. We can still further increase this effective distance by placing the resonator in the focal line of a second reflector exactly similar to the first, the two reflectors being so placed that their planes of symmetry coincide. An insulating screen, such as a wall, interposed between the two mirrors does not intercept the undulations; but a conducting screen cuts off the undulations and casts a shadow behind it.

These phenomena are identical with those produced by rays of light; there exists no difference between light waves and electric waves except as regards the magnitude of their wave-lengths; the waves of light are a million times shorter than

the electrical waves produced by Hertz's oscillator. The fact that Hertzian oscillations are not reflected by a wall can be compared with the fact that light is not reflected by a very thin transparent body. It is a well-known fact that soap bubbles do not reflect the objects around just at the moment of bursting. Then the length of the waves of light bear the same relation to the thickness of the soap film as the length of Hertzian waves to the thickness of a wall.

Electrical waves are propagated in straight lines, a fact proved by the interception of the rays by a metallic screen. The mode of production of oscillations shows that they are directed parallel to the axis of the oscillator, that is to say, that the rays are transversal and, to use an expression employed in optics, rectilinearly polarized. If we place between the two mirrors a grating of metallic wire, the effect is different according as the wires of the grating are parallel or perpendicular to the axis of the vibrator. In the former case electrical waves pass through the grating without difficulty and affect the resonator. In the latter case electrical force is absorbed by the wires which are normal and the rays are extinguished. The effect is similar to that of a plate of tourmaline in optics.

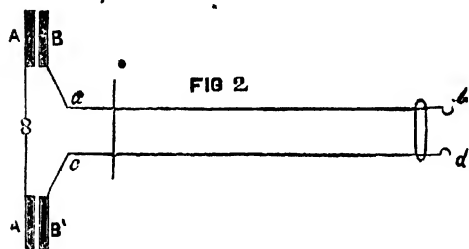
If we remove the grating and turn the resonator with its reflector through a right angle so that the focal line of the mirror of the vibrator is at right angles to that of the mirror of the resonator, we no longer observe any sparks in the resonator. But if in this position of the resonator we interpose between it and the vibrator once again the grating of metallic wires with its plane normal to the rays transmitted but with the wires inclined at an angle of  $45^\circ$  to the focal lines of the mirrors, the grating decomposes the incident waves and transmits the vibrations inclined at  $45^\circ$  to the axis of the resonator, and these components then act on the resonator and produce sparks. This phenomenon exactly resembles what occurs in the field of two crossed Nicols on interposing between them a double refracting crystalline plate.

Finally these mirrors enable us to demonstrate clearly the phenomena of reflection and refraction of electrical waves. If, for example, we make the electrical waves fall upon a plane conducting wall, we can receive the reflected waves on the resonator provided that we place the two parabolic mirrors in such positions that their planes of symmetry intersect on the surface of the wall and the plane normal to this surface drawn through their line of intersection bisects the angle between them. In order to produce the phenomena of refraction Hertz employed a large prism of pitch with a refracting angle of  $30^\circ$ . The incident pencil from

the vibrator after passing through the prism makes with the refracted pencil received by the resonator an angle which gives for the index of refraction of pitch a value nearly equal to 1.7, a value which is slightly larger than what is obtained by experiments in optics. Hence Hertzian waves are refracted by a prism of insulating material exactly in the same manner as light is refracted by a prism of glass.

The experiments of Hertz have been repeated by various physicists. MM. Sarasin and De La Rive have shown that an oscillator produces sparks in a resonator even when their periods differ considerably, and the length of the wave observed depends much more on the dimensions of the resonator than on those of the vibrator. This proves that the undulations proceeding from an oscillator are complex, and result from the super-position of an infinite number of simple waves, and a given resonator responds only to one of these components, while the other components have no influence on it. This also accounts for the fact that when we produce an oscillatory discharge in a room, we see sparks flying between metallic objects placed near each other. These sparks can light a jet of gas, make a mining fuse explode and illuminate a vacuum tube.

We have already seen how Hertz demonstrated that the velocity of electrical waves in air is identical with that of light. Another consequence of Maxwell's theory is that electrical waves travel through metallic wires also with the same velocity. Hertz also investigated the propagation of electrical waves through wires, but the following method employed by Dr. Lecher of Vienna is more convenient. *A* and *A'* (Fig. 2) are square plates of metal



connected with each other by an intermediary wire having a small spark gap between two small knobs. Opposite to these plates stand at a small distance two similar plates *B* and *B'* of the same size from which two insulated parallel wires *ab* and *cd* proceed extending over a length of five or six hundred centimetres. Over the ends of these wires is placed a Geissler tube, which serves as a resonator. When oscillations are produced between *A* and *A'*, by induction electrical oscillations are generated also

in the plates *B* and *B'* which travel along the parallel wires and illuminate the Geissler tube. If now we glide a metallic bridge along the wires from *ac* to *bd*, in some positions of the bridge the illumination in the tube becomes feeble and at other positions it is reinforced. The phenomenon is similar to the propagation of sound in a closed pipe. At the nodes the air in the pipe is at rest, but its pressure is different from the atmospheric pressure; in the ventral segments the particles of air are in rapid vibration, but the medium suffers no variations of density. Therefore, if we open a hole in a pipe before a ventral segment the sound is not altered; on the other hand, if we open a hole in front of a node, the sound becomes changed. Similarly at the nodes of Hertzian waves the difference of tension is maximum and a metallic bridge on the two wires at these points prevents the discharge from traversing the Geissler tube. On the other hand, if the bridge connects the two wires at the ventral segments, its influence is nothing and the tube is illuminated. In this way Lecher measured the wave length of electric waves and proved that the velocity of propagation of Hertzian waves in conductors is nearly the same as that of light.

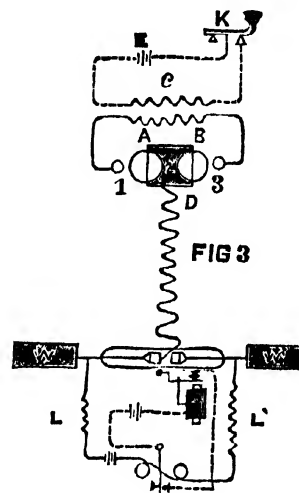
Many attempts have been made after Hertz's discovery to increase the intensity of electrical oscillations and the sensibility of resonators. In the oscillator of Hertz the metallic knobs between which the spark passes, easily oxidise and their surfaces become wrinkled, which affects the regularity of the spark and hence the production of electrical waves. To prevent the irregularity of the spark the knobs have to be frequently polished. In Righi's vibrator this inconvenience is obviated by making the spark pass between brass spheres immersed in oil. This arrangement not only prevents the balls from oxidising but also augments the intensity of the electrical vibrations generated. Dr. Jagadese Chander Bose of Calcutta has got rid of this difficulty by replacing the brass balls by spheres of platinum, a metal which does not oxidise in air even when strongly heated. As the sparks produced in a resonator by the effects of electrical waves are very feeble and can only be observed with difficulty in darkness, to make the presence of electrical waves perceptible, other effects produced by them have also been employed for the construction of resonators. Of these the most sensitive instrument is the one based on a new property of electrical waves discovered by M. Branly. M. Branly experimentally proved that metallic powders which, though consisting of particles each of which is a good conductor of electricity, present considerable resistance

to the flow of electricity suffer a notable diminution in their resistance when they are exposed to Hertzian radiations, that is to say, to the forces of induction which are exerted in the neighbourhood of an oscillator. This effect may be due either to the welding together of the particles of the powder by the microscopic sparks produced by the electrical oscillations, or to the orientation of the particles during the discharge. Whatever may be the reason, the Hertzian waves act as if they produce more intimate contact between the various particles of the powder. To bring the powder back to its original condition it is enough to give it a shake. On these facts is based the construction of a new resonator, which has been called radio-conductor or coherer, and which in the hands of Professors Lodge and Jagadese Chander Bose has become an extremely sensitive instrument for the detection of electrical waves. Professor Lodge's coherer consists of metallic filings placed in a narrow glass tube between electrodes connected in series with a battery and sensitive galvanometer; the tube is partially exhausted and sealed at the ends with a view to diminish the oxidation of the filings when sparks pass between them and further to facilitate the passages of the sparks themselves. When Hertzian radiations do not fall on the radio-conductor, it is traversed solely by the continuous current of the battery. When Hertzian oscillations fall on it, it is traversed by the continuous current of the battery as well as by rapid alternating currents due to induction; in this case the resistance being diminished by the rapid alternating currents, the continuous current becomes more intense and produces a greater deflection in the galvanometer. The resonator is brought back to its initial state either by striking it with the hand or by means of a clapper worked by clock-work.

The coherer of Lodge is, in spite of its marvellous sensibility, somewhat capricious in its indications. Sometimes it becomes so extraordinarily sensitive that the galvanometer suffers a deflection without any apparent cause; sometimes, just at the moment when it seems to work admirably its sensitiveness disappears suddenly. Professor Bose has therefore made some modifications in the original radio-conductor. Into a narrow groove cut in a disc of ebonite are introduced spirals of fine steel wire so as to form a single layer, each spiral touching its neighbour at some definite point. The spirals are placed between two pieces of bronze, one fixed and the other capable of gliding, and these pieces are in communication with a battery. The sensibility of this resonator is almost perfect, and it is capable of responding to

different sorts of radiations. The instrument is enclosed in a metallic case with only a narrow straight opening in front, and is therefore protected from all other undulations than those which are concentrated on the opening.

The discovery of electrical waves has found a practical application in telegraphy without wires. The system of telegraphy without wires contrived by M. Marconi, an Italian engineer, is based on the use of vibrators and coherers. As transmitter he employs a vibrator of Righi's pattern. In an oil-tight case D (Fig 3) of insulating

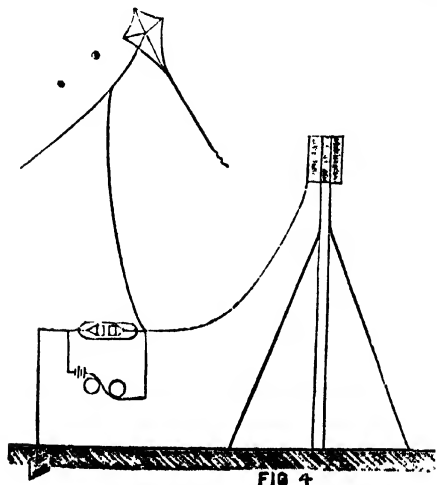


material are placed two brass balls A and B, one half of each of which protrudes outside the case while the other halves are immersed in vaseline. As was already pointed out, the use of oil has many advantages. It protects the surfaces of the balls from oxidising and thus removes the inconvenience of frequently polishing them, and thereby secures a regularity and constancy in the electrical waves produced. Besides the two large spheres there are two smaller spheres (1 and 3), which are connected with the secondary spiral of an induction coil C. The primary coil of C is connected with a battery through a Morse key K. Each time that K is pressed down sparks pass between 1, 2 and 3, and electrical oscillations of great rapidity (about 250 millions per second) are generated in the system of conductors A and B. The distance, in which such rapid oscillations can produce their effects, depends primarily on the energy of the discharge. A coil with a spark length of 152 millimetres suffices for a distance of 1 to 6.4 kilometres; for greater distances we need a stronger coil capable of giving sparks nearly half

a metre in length. It may also be mentioned that this distance increases with the diameter of the spheres A and B and becomes nearly doubled when we employ solid spheres instead of hollow ones.

Marconi's receiver consists of a small glass tube containing a thin layer (about a half a millimetre) of a mixture of nickel and silver filings with a trace of mercury between two silver electrodes. The tube is exhausted and sealed at both ends and forms part of a circuit in which a local battery and a sensitive telegraph relay are included. The electrical resistance of Marconi's coherer is under ordinary circumstances very large, and the powder acts almost as an insulator. But when electrical waves fall on the powder, the resistance falls considerably and the circuit of the local battery is closed. To bring the coherer back to its initial condition Marconi employs a hammer which, worked by a second local circuit, gives at short intervals a gentle blow to the tube and shakes the powder. The same current which works the hammer is also employed for working a Morse recorder for recording the messages received on paper. The glass tube also carries two arms W and W' which are intended to bring the resonator into accord with the transmitter. Any loss of energy is prevented by the coils L'.

In open country devoid of trees, buildings, &c., and for short distances this method leaves nothing to be desired; when there are obstacles and the distances to be traversed by the electrical waves are great, the instruments have then to be placed at high places, by means of masts, balloons, paper kites, &c. By employing the arrangement shown in Fig. 4 we can dispense with the use of the arms



W and W'. In this arrangement one of the electrodes of the receiver is put in communication with the earth, and the other is connected by means of a wire with a sheet of metal supported on a tall post, a balloon or a paper kite. Similar connections are also made at the transmitting station in connection with the transmitter. In this case the metal sheet and the connecting wire serve the purpose of the arms in catching the electric waves.

Marconi's system of wireless telegraphy has not yet been adapted for sending electric waves over long distances in a definite direction. Indeed it has been possible with the aid of mirrors similar to those employed by Hertz in his experiments to transmit electric rays over short distances in a definite direction. But for traversing great distances we have to employ long wires for catching the waves, which make the use of mirrors impossible, and consequently the telegraphic messages are transmitted in all directions in spaces and received in places for which they are not intended. Nor has it been possible to overcome this defect by making the receiving wire capable of absorbing waves of only one definite wavelength. The hygrometric state of the air seems to exert no influence on the behaviour of the receiver, but atmospheric electricity acts strongly on the receiver and gives rise to false signals. In one of his most recent patents Marconi has almost got rid of these disturbances due to atmospheric electricity by the employment of transformers and condensers in connection with the receiver.

Marconi's wireless telegraphy is generally employed for establishing communication between vessels on the mid ocean or between the coast and vessels situated not far away from the coast. It is of the greatest value in signalling from light-houses in times of fog. In order that a ship might determine the direction of a light-house, the latter is generally provided with a transmitter connected with a vertical wire, from which proceed continuously in all directions signals which are different for different light-houses. The ship carries receiver fitted with a parabolic mirror, which is revolved round a vertical axis. Each time the plane of symmetry of the mirror is in the direction of the light-house, the receiver is influenced by signals therefrom. Communications between the different parts of a place of military operations have also been carried on by this system.

In conclusion it seems to me to be not inappropriate here to attempt to remove certain misconceptions which exist in some minds especially of persons who have not had a special training in physics, as to the significance of Hertz's discoveries. It is

often said that Hertz has demonstrated that electrical and magnetic phenomena are due to wave-motions in the ether, just as the phenomena of sound are due to wave-motions in the air. It may boldly be asserted that Hertz has done nothing of the kind. The word ether or æther is only another name for space devoid of matter, for what we generally term vacuum. Experimental investigation has revealed to us the physical properties of vacuum. One of these properties is that light is propagated through a vacuum; another is that electrical induction can take place through it, and so forth. All that the discoveries of Hertz tell us is that certain electrical and magnetic phenomena are so very closely akin to optical phenomena that a distinct saving of mental labour is effected by including the latter within the province of the former. Again, we nowadays often hear and read of the question, what is electricity? One may naturally ask: Have not Hertz's discoveries brought us nearer to a solution of this question? The answer will be yes or no, according to the sense in which the question is understood. This question may be answered most easily by a counter-question: What is matter? If it is said that we have found the essence of matter when we have learnt all its properties, so also can we say that Hertz's discoveries have made known to us that more phenomena are summed up in the term electricity than was the case formerly. But if by the essence of a thing is meant more than the sum total of all its observed and observable properties, we can say that physics shall never be able to answer questions concerning the essence of things. Physicists know no more of the essence of electricity than the proverbial man in the street knows of the essence of a stone he holds in his hand.

P. LAKSHMI NARAYAN.

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#### PROGRESS OF PHILOSOPHIC THOUGHT DURING THE VICTORIAN ERA.

THE critical movement started by Locke in the eighteenth century, which culminated with Hume, is regarded as reflecting the national character of the English. Locke, the intellectual ruler of the eighteenth century, is, therefore, spoken of as the typical representative of English philosophic thought. A spirit of free enquiry, a vigorous grasp of facts, a distrust and disgust of metaphysical

sical subtlety, and a preference for an empirical genetic consideration of the human psychical life,—these are the main tendencies of Locke's speculative thinking; and these resulted in establishing an empirical philosophy. It was this empiricism, with a strong leaning towards materialism, that was the prominent feature of speculative activity at the beginning of the Victorian era, when the influence of Jeremy Bentham and James Mill were at its highest. This empirical trend of thought received a still greater stimulus in the hands of John Stuart Mill, undoubtedly one of the greatest thinkers of the Victorian era. J. S. Mill was by no means a materialist, but he was an uncompromising empiricist; and though there is no necessary logical connection between empiricism and materialism, still the former has always withstood idealism, and has refused to recognize anything more than a bare succession of sensations as the sole constituents of mind.

When we speak of Mill's influence as being all in the direction of empiricism and realism, we do not forget two of the most potent thinkers of the nineteenth century,—Coleridge and Carlyle, who, though not systematic writers on philosophy, yet had considerable influence on English thought during the Victorian era. Both came under the influence of German idealism and both resisted, with all their might, the current of empiricism and materialism, which the associative psychology of J. S. Mill had re-established energetically. It is the fashion, in certain quarters, to cry down Coleridge's philosophy as nothing but "transcendental moonshine," but it must be remembered that it was Coleridge that awoke a new sense and new views in the younger generation when the current was flowing all in one direction; and he was ably supported by Carlyle. Both set up intuition in opposition to empiricism, both protested against psychical life being explained by pure mechanical laws, both upheld the unity and activity of the mind, and both emphasized the value of personality. Coleridge, of course, revelled

too much in the ideas of the Absolute, while Carlyle was not favourably disposed towards any dogmatic theorising about the Unconditioned, but both regarded existence as an inscrutable and inspiring mystery. "Nature is a great symbol, a revelation of ideas which can be grasped by no scientific method. The world is not the dead machine science would have us believe."

For a time it looked as if the empiricism of Mill and his followers, like George Grote and Bain, would become the dominant philosophy of the Victorian era, for there were new tendencies at work which, besides firmly re-establishing empiricism, tended to drive it in the direction of gross materialism. In 1859 appeared Darwin's famous work on the "Origin of Species"; and it is no exaggeration to say that this work, which contained the first authoritative enunciation of the principle of evolution, has brought about a revolution in the conception of nature similar to that effected by Copernicus, Galileo and Newton. No less significant was the change brought about by evolution in philosophic speculations. Darwin, it is true, confined the application of evolution chiefly within biological grounds, but Herbert Spencer tried to show that the concept of development applied to all spheres. In fact, Herbert Spencer laid the foundation of his great synthetic system of philosophy based on the principle of evolution even before Darwin's "Origin of Species" appeared, so much so that Darwin pays Spencer the compliment of having been his predecessor in the discovery of the principle of evolution. The effect of the application of the principle of organic evolution to explain consciousness and psychical life in all its manifestations was merely to corroborate and extend empiricism. If Mill and his school explained every phase of mental manifestation as due to the experience of the individual, Spencer refers everything to the experience of the race. More than this, Spencer applies his principle of evolution to account for even life and consciousness as the outcome of

matter and motion. This is nothing but pure materialism and it was this form of thought that seemed most popular during the first thirty years of the Victorian era. The undue value attached to the principle of evolution,—for everything new is over-estimated—the great advance of biological science and the general materialistic tendency of the age, all combined to make philosophy drift in the direction of materialism during the beginning of the Victorian era.

The reaction, however, soon set in, and if there is anything characteristic of the philosophic thought of the later Victorian era, it is a tendency in the direction of anti-empiricism and anti-materialism. Even the science of biology has come to the aid of psychology in opposing materialism; for the biologists are as strong in repudiating the doctrine of spontaneous generation as the psychologists are in contending against the view that mental phenomena can be explained by purely mechanical laws. With what powerful weapons modern thinkers assail the mechanical conception of nature and the empirical mode of explaining psychical manifestation will be seen in the writings\* of T. H. Green, James Ward and others. We may, therefore, well say, in the language of the *Spectator*, that "the ghost of materialism (if we may make use of such an expression) has been finally laid by the critical thought of the last century." But the current of thought has not merely been anti-materialistic, it has also been idealistic, and of the philosophic thought of the latter half of the century nothing is clearer than this, namely, that all schools tend to the doctrine of philosophic unity. The principle of dualism enunciated either by Reid or Hamilton has found very few able supporters; but whether we take the neo-Kantianism of Dr. Caird, or the neo-Hegelianism of T. H. Green, or the idea of double-faced unity of Bain, or the idealistic theism of Ward, or even the Spencerian doctrine of the Unknowable—

\* Vide T. H. Green's *Prolegomena to Ethics* and *Introduction to Hume* and Ward's *Naturalism and Agnosticism*.



in all there is a strenuous attempt to reach a universal unity, a spiritual substance from which all else take their rise.

The Victorian era has seen the placing of psychology on a more satisfactory scientific basis than it has ever been before, and the countrymen of Locke have had no small share in this great work. Of course the empirical influence even in this department of thought was at first very strong and manifested itself chiefly in three directions; -- in the attempt to deal with psychology as a purely phenomenalscience; in the undue importance attached to the physiological concomitants of psychical phenomena; and in the endeavour to apply rigidly the experimental method of research so as to enunciate psychical laws in quantitative terms. But that there has been a strong reaction against these tendencies is fully borne out in the writings of eminent psychologists such as Mivart, Ward, Stout &c. The spiritualistic trend of thought of the Victorian age is also manifest in the importance given to psychical research; and there is no doubt that the problem of the sub-conscious manifestations of mind is becoming more and more the central problem of modern psychology. The importance of psychology as forming the basis of the science of education has only been recognized within recent years; and the science of mind is also coming to be regarded as forming the necessary groundwork of the political and social sciences and of the science of jurisprudence.

In the department of Logic, the Victorian era has produced some eminent writers. It is true much advance has not been made in Formal Logic since the time of Aristotle, but some important developments in the direction of Symbolic Logic have been made by eminent writers such as Boole, Jevons, Venn, Keynes and others. It is to J. S. Mill we owe the systematic development of Inductive Logic on purely empirical lines; and in this respect he may be regarded as the legitimate successor of Francis Bacon. The tendency of the times is to reconstruct Logic from the point of view of

Methodology, thus bringing it into active relations with the scientific problems of the present day. This is what we notice in the writings of Whewell, Jevons and others.

The Victorian era has produced some very eminent ethical writers among whom, as occupying a foremost place, may be mentioned J. S. Mill, Sidgwick, Herbert Spencer, T. H. Green and Martineau. The utilitarian form of morality was no doubt very popular at the commencement of the Victorian era, owing chiefly to the influence of the school of Bentham and Mill; but the anti-empirical tendency has asserted itself even in this department of thought; for we notice this influence not only in the *ideo-psychological* view of ethics of Martineau and in the theory of self-realisation of the school of Green, but also in the intuitional utilitarianism of Sidgwick who, of all the modern thinkers, came most under the influence of Mill. Summing up briefly, we may say that the drift of speculative thought in the Victorian era has been against a mechanical conception of nature and in favour of spiritualistic idealism.

The era has also seen the opening of the portals of Indian philosophic thought to the English-speaking world. The publication of the 'Sacred Books of the East,' Trubner's 'Oriental Series,' and the writings of Max Müller have made familiar to English readers some of the grandest speculations of ancient India; but the task of developing Indian philosophic thought on sound critical lines rests with the sons of India. There is a tendency in these days, in India, to attach an undue importance to the physical sciences to the exclusion of the mental sciences. It is taking a lamentably narrow view of education, to confine it merely to subjects which have "actuality," that is, subjects which show a clear connection with the practical needs of the age. Let by all means the study of the natural sciences be encouraged, but let, at the same time, philosophical, historical and other literary studies receive their due share of attention. The absence of a proper scientific method of philoso-

phic enquiry has been, no doubt, a serious drawback which has stood in the way of progress of Indian philosophy; but with an acquaintance with the scientific methods of enquiry which Western thinkers have developed, there is open to the Indian mind a field for original investigation in philosophy of a most promising nature.

S. SATTIANADHAN.

### THE USE OF CARBONATE OF SODA.

ANOTHER product of Madras, to which, it seems to us, insufficient attention has been paid, is sodium carbonate or carbonate of soda. This substance, known in commerce as soda-ash, is manufactured in England on an enormous scale, and used for glass-making, soap-making, bleaching and various other purposes in arts. Formerly, it was prepared from Barilla or the ashes of sea-plants, but now it is wholly prepared from sea-salt by a series of chemical decomposition. The first and older method is termed, from its discovery, the Leblanc process. The second and newer method is called the ammonia-soda process.

The Leblanc process may be divided into two stages, (1) Manufacture of sodium sulphate, or salt-cake, from sodium chloride (common-salt) called salt-cake process; (2) Manufacture of sodium carbonate, or soda-ash, from salt-cake, called black-ash process. The latter, being the more modern process, is worthy of description. It consists in the decomposition of salt by means of sulphuric acid, and is effected in a furnace called the salt-cake furnace. It consists of (1) a large covered iron pan placed in the centre of the furnace and heated by a fire placed underneath, and (2) two roasters or reverberating furnaces, placed one at each end, and on the hearths of which the salt is completely decomposed. The charge of half a ton of salt is placed in the iron pan, and the requisite quantity of sulphuric acid allowed to run in upon it. Hydrochloric acid gas is evolved and escapes freely through a flue, with the products of combustion into towers or scrubbers, filled with cakes or bricks moistened with a stream of water. The whole of the acid vapours are thus condensed, and the smoke and heated air pass up the chimney. The acid fumes from the salt-cake furnace enter the tower, passing up this tower it meets with the descending current of water. The dilute acid thus formed runs away by a pipe at the base of the

tower, whilst the unabsorbed fumes and products of combustion pass down the brick tunnel into the second tower in which they ascend and meet another current of falling water. When the vapours reach the top of this tower they are perfectly free from hydrochloric gas, and are allowed to pass through stone-ware pipes to the chimney. By Act of Parliament the alkali makers are compelled to condense at least 95 per cent of the hydrochloric acid gas they produce, and no escape of more than 2 grains of hydrochloric acid gas per cubic foot of air is permitted from any chimney. So perfectly is this condensation, as a rule, carried out, that the escaping gases frequently do not cause a turbidity in a solution of silver nitrate, proving the absence of even a trace of the acid gas. After the mixture of salt and acid has been heated for some time in the iron pan and has become solid, it is raked by means of doors onto the hearths of the furnace, at each side of the decomposing pan, where the flame and heated air of the fire complete the decomposition into sodium sulphate and hydrochloric acid.

The hydrochloric acid is a most valuable product, being used for the manufacture of bleaching powder. In the Madras Presidency, we know of no scientific methods for the production and treatment of carbonate soda, though this is a product peculiar to the Presidency, seeing there is no district of it where it is not to be found in quantities almost astonishing. Take Barilla for instance. It is known in Tamil as *Applacaram* and is obtained from *Salicornia*, *Arabica* and from *Salicornia Indica*. The genus *Mesembry Anthemum* is rich in alkaline carbonates and usually frequents the sea-shore. Dr. Roxburghe was of opinion that the two specimens of *Salicornia* and one of *Selsola* which are extremely abundant on the Coromandel coast, might be made to yield Barilla sufficient to make soap and glass for the whole world. But it is doubtful whether the manufacture could come into competition with the more economical processes for procuring this substance from dhobie's earth (carbonate of soda) tracts of which are to be found in each and every district of this Presidency.

From dhobie's or fuller's earth, after lisciviation and evaporation, carbonate of soda is produced and out of this product, bangles, glass and soap are manufactured to some extent. Indeed, glass bangles are largely made in parts of the Presidency, a workman turning out as many as 600 or 700 daily. Some are of beautifully tinted glass. Jade bangles in Yunnam sell at Rs. 125 a pair. Speaking of bangles reminds us of a curious custom that prevails in Bengal. There a bangle of iron is put on the left

hand of the Hindu bride by her mother-in-law with a benediction that she may be ever blessed with her husband and she marks the middle of the bride's forehead with vermillion. The iron or other metal denotes *ayestri* or the married state. The Chinese make bangles from a clouded or plain vitreous substance to imitate jade-stone or chalcedony.

Soap too is manufactured in this Presidency from carbonate of soda, that of the best quality being made in Madura. Soap seems to have been introduced by the Muhamadans into India, though the Hindus have long used alkaline leys, obtained from the ashes of plants for many of the purposes of soap; and they have a substitute for soap in several kinds of berries.

E. H. BROOKES.

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The World of Books.

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THE EDUCATION OF THE YOUNG IN THE  
REPUBLIC OF PLATO *by Bernard Bosanquet.*  
(Cambridge University Press.)

The republic of Plato forms one of those 'Marrowy' books which are of equal interest to the man of letters, the philosopher, the educationist and the politician. That the book shows the greatest breadth of views and the finest perfection of style, that in it the ancient philosophy reaches its highest development and that the ideal state therein described furnished the model for the political or theological fancies of Cicero, St. Augustin, Sir Thomas More or Harrington need not concern us. It is Plato as an educationist we have to deal with. So much of the republic as deals with the subject (*i.e.* part of the 2nd book and the whole of the third and fourth books) have been translated by Mr. Bosanquet. The rendering into English is as close as is consistent with the genius of the language and the writer does not shrink the awkwardness that follows from the rigorous standard of faithfulness to the original that he has prescribed for himself. The notes are brief and are mainly exegetical. The translation is preceded by a brief introduction describing Greek education in the best days of Greece, education in Plato republic and education after Plato's time. The introduction is helpful in giving the necessary historic information to help the reader to understand the position and importance of Plato as an educationist.

The two things that will strike the most careless reader of the republic is the stress Plato lays on the physical and the moral development of the youths. What occupies the attention of us all

teachers in India, the cultivation of the intellect, is relegated altogether to a secondary position. The conditions of school-boy life in Athens seem to have differed very much from those of the belauded public school life in England and approached more the conditions of school-boy life here in India where there is not such a complete divorce between school life and home life. Another striking thing is the wonderfulness of the results flowing from what would strike the modern educational expert as the slenderest equipment of methodical school learning. Is not there a tendency in modern days, in our over-anxiety to educate our youths, to leave too little to the boys' own initiative and is Dr. Dulcimer's famous suburban establishment where masters learnt the lessons and the boys heard them so much of a caricature by Kingsley as we are apt to suppose?

Any series of educational books which would leave Plato's Republic would be on a par with the erudite monograph on Defoe which omitted all mention of Robinson Crusoe and we commend the scholarlike translation of Dr. Bosanquet to all interested in the work of education.

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POPULAR STUDIES IN MYTHOLOGY: ROMANCE AND FOLKLORE, No. 9, THE RIG VEDA, *by E. Vernon Arnold.* (Published by David Nutt.)

This is a popular exposition in a very small compass of the principles which ought to be kept in view in the study of the Rig Veda and of the religious and social ideas of the people amongst whom it was produced. The author treats first of the earliest hymns of the Rig Veda, giving some account both of their literary form and of their substance. Having thus given a general sketch of the religious worship of the Indo-Aryans at this period, he compares it with that maintained by their nearest kin, the Turanians, at a like time; and from this starting point, he traces, to some extent, the earlier history of the beliefs and practices embodied in both. Afterwards an account is given of a few of those myths which abound in the later hymns of the Rig Veda, but which can seldom be traced backwards, even so far as the earlier hymns. Those who have no time to study the larger treatises on Vedic religions and mythology embodying the results of recent linguistic and historical research will find in this small volume enough to give them some idea of what is being done by scholars of the west in the field of Vedic interpretation and criticism. The bibliography and notes appended to it will be found of immense value.

## IN THE ICE WORLD OF THE HIMALAYA :

AMONG THE PEAKS AND PASSES OF LADAKH, NUBRA, SURU AND BALTISTAN, by *Fanny Bullock Workman*, M. R. A. S., F. R. G. S., &c. and *William Houlder Workman* M. A., M. D., F. R. C. S. &c. (London T. Fisher Unwin 1900.)

Dr. and Mrs. Workman are indefatigable travellers. For three years they seem to have travelled in the East, bicycling in the plains of India, Ceylon, Java, Sumatra, Indo-China and Burma in the cooler months and climbing in the Himalayas in the hot weather. The present book is an account of the more interesting experiences in 1898 and 1899 of journeys into the mountains from Srinagar and Darjeeling. Of these, the wanderings of the second year are the most interesting, as the travellers did not get much off the beaten track from Srinagar in 1898, and their attempt to explore from Darjeeling was a failure owing to difficulties with coolies and headmen.

In the summer of the following year the writers secured the services of the well-known Alpine guide Mathia Zurbriggen, and started from Srinagar for Baltistan. After many days' journey over passes 12,000 to 14,000 feet high they reached Shigar where they exchanged visits with the Rajah, and then went on to Askole, a place known locally as the end of the world, apparently because it is the last group of villages on this side of the great Snow Mountains, and is only accessible on the Shigar side by a long rope bridge over the Braldu river. The object of the journey was the exploration of the Biafo Glacier, said to be the largest outside the Arctic regions, though on the map the Hispar Glacier on the reverse slope from the Biafo seems as large. The extent of the Biafo Glacier may be realised from the fact that our travellers spent many days in traversing it and had to form five camps in order to attain its summit on the Hispar Pass, 17,475 ft. above sea-level. Of course, glacier travelling is slow, particularly, as often happens when it lies among broken masses and hummocks of ice interspersed with crevasses making roping and the frequent cutting of steps with the ice-axe necessary. Dr. and Mrs. Workman seem to have been rewarded for their toil by the splendid scenery of the vast tributary glaciers which join the Biafo on each side, and the rocky and often snow-clad peaks and mountain masses that separate them. At the head of the Biafo is what is called the Snow Lake, a snow field at least twenty five miles square and seemingly with an absolutely unbroken surface.

The authors were not the first explorers of the Biafo, as Sir W. M. Conway had been there before them. Later in the same journey, however, they

ascended two virgin peaks to which they gave the names of Siegfriedhorn and Mount Bullock Workman. Perhaps the most notable of their exploits, however, was the ascent from Shigar of Koser Gunge, another unscaled mountain 21,000 feet high. To accomplish this two camps had to be made, the second on a bare stony slope with a night temperature of 20° Fahr. This camp was left for the summit on a fairly promising morning, but after several thousand feet of the most difficult rock climbing, a snow slope had to be passed in the teeth of a storm of wind and snow. The climbers persisted and had such satisfaction as is afforded by finding that their aneroids registered at the summit "one a hundred feet under, the other a hundred and fifty feet over, 21,000 ft." with a temperature of 10° Fahr.

The present reviewer's experience of Alpine climbing is unhappily limited to seeing from the safety of a hotel veranda some people coming down the Eiger. He is not therefore in a position to "place" Dr. and Mrs. Workman in the ranks of Alpinists. They inscribe their photograph however "Two Record Climbers," and it is easy to believe that Mrs. Workman is the only lady who has attained the immense height of 21,000 ft. above sea-level. Whatever importance the book may have to mountaineers and scientists, we have no hesitation in recommending it to our readers, as a thoroughly interesting story of travel, told with unaffected straightforwardness and a good deal of quiet humour. It is magnificently illustrated from photographs taken by the authors which go far to help one to realise the awe-inspiring beauty of the snowy wastes of the Himalaya.

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## PALI BUDDHISM by H. H. Tilbe M. A.

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This little work has been prepared especially to meet the practical needs of those preparing for the Pali examinations of the Calcutta University and aims at furnishing a brief, reliable, clear, well-arranged, and inexpensive outline of Buddha's real life and teaching. Those who have no access to larger treatises on Buddhism will find in this all that they need know in regard to the land of its rise, its founder, its doctrines and its institutions. The author is a great Pali scholar and has drawn his materials for this volume from the original sources. It is well got-up and priced moderately.

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ASVAGHOSHA'S DISCOURSE ON THE  
AWAKENING OF FAITH IN THE MAHĀ-  
YANA, translated by Teitaro Suzuki. (*The Open  
Court Publishing Company, Chicago.*)

This small but profound treatise, written about the beginning of the Christian era by Aśvaghosha, one of the deepest thinkers among the Buddhist patriarchs, is the first attempt at systematising the fundamental thoughts of the Mahāyāna Buddhism and is recognised by all Northern schools and sects as orthodox and used even to-day in Chinese translations as a text-book for the instruction of Buddhist priests. It contains almost all the elements of the thought fully developed afterwards by Nāgārjuna and other later Mahāyāna representatives. It was originally written in Sanskrit, but the original Sanskrit text has never been found, and we are informed by the translator that, as far as India is concerned, there is no hope of getting it. It is a great pity that such an important Buddhist philosophical work can be studied only through translations. There are two Chinese translations of the book still in existence, one by Paramārtha (A. D. 554) and the other by Cīkshānanda (A. D. 700). The present English translation is made from the second Chinese version by Cīkshānanda, but the first version has been carefully compared with it, and wherever disagreements occur between them they have been noticed in foot-notes. Mr. Teitaro Suzuki, a Japanese Buddhist scholar, has done immense service to the cause of Buddhism by his excellent and remarkably lucid rendering of Aśvaghosha's monograph into English form. His introduction, comments, and glossary are highly valuable.

The chief feature in the doctrine of Aśvaghosha which forms the gist of this book is the conception of Suchness. (*Bhūtatathatā*). Suchness, according to Aśvaghosha, is the formative principle which lies at the root of cosmic existence and order; it is the sum-total of all those factors which shape the universe and determine the destiny of its creatures. It is the soul of all the sentient beings (*Sarvasattva*) and of all things in the world, phenomenal and super-phenomenal. The conception of suchness assumes other names, namely, the Womb of the Tathagata (*Tathagatha-Garbha*.) when considered from its embracing all possible merits, and the All-Conserving Mind (*Alayavijñāna*), when viewed as the principle of evolution. Suchness is the absolute principle which constitutes the ultimate foundation of existence and in which all forms of individuations are merged. It is nothing but intelligence pure, perfect, and free from all possible evil. It is at once Sunya and Aṣunya. It is Sunya because it transcends all forms of separa-

tion and individuation; it is Aṣunya, because all possible things emanate from it. Suchness becomes in its relative or transitory aspect, through the law of causation, the material world of concrete objects, the realm of birth and death, (*Samsāra*).

How suchness though pure in its essence, is yet subject to defilement or conditionality, and manifests itself in the manifold forms of transitory existence implicated with sorrow and pain is a mystery which can be comprehended only by a fully enlightened mind or Buddha. To the sentient subjects the world consists of a number of isolated objects and beings and their fundamental identity is totally lost sight of. The nature of subjectivity is sense-perception; and in sense the particular things are represented in the particularity only, not in their suchness as momentarily materialised universals. We must overcome subjectivity, the result of Avidya or ignorance, in order to discover suchness, and when suchness is recognised, it is at once understood to constitute the essence and only true reality of things. By the annihilation of the wrong affirmations and false judgments that generate the dualistic world-conception, we reach the highest and unconditioned reality. All things, simply on account of our confused subjectivity, appear under the forms of individuation. If we could overcome our confused subjectivity, the signs of individuation would disappear, and there would be no trace of a world of individual and isolated objects. All modes of relative existence, our phenomenal world as a whole, are created simply by the particularisation of the confused mind. If we become dissociated with the latter, then all modes of relative existence vanish away by themselves; while the soul alone, in its truth and suchness, is seen to pervade the universe. When we completely free ourselves from subjectivity and realise the essence of suchness and the oneness of existence, we for ever destroy the seeds of birth and death and attain to Nirvana.

Such in brief is the doctrine of suchness developed by Aśvaghosha in this treatise. It is an extreme form of idealism for which it is easy to find parallels in the speculative philosophy of the West as well as of the East. We trust that the present publication will contribute to a better understanding of the fundamental doctrines of Mahāyāna Buddhism about which all sorts of absurd and erroneous conceptions are prevalent among some orientalists and secure for this ancient system of thought its rightful place among the philosophical systems of the world.

# ENQUIRE WITHIN UPON EVERYTHING: (Houlston and Sons. Price 2/6).

In his Convocation address delivered some years ago, the late Sir T. Madhava Row exhorted his audience to know something of everything and everything of something. The young graduates fresh from college were then inclined to set down the advice as of the usual Todd's Student's-Manual type. Yet experience will tell any one that the advice was as statesmanlike as it was simple. The struggle for existence has become so keen that success in the race of life can be looked for only by those who by training and apprenticeship have mastered the details of the line they have chosen for purposes of bread-winning. The cry for technical education now being heard from all sides is simply another phase of the question, and it may be taken for granted that, unless a man is determined to go to the wall, he will perforce know everything of something.

There is no guarantee, however, that a man will know something of everything. Yet the importance of such knowledge cannot be over-estimated. Life will be intolerable if one can only talk shop and cannot genially take part in the thousand and one little topics that go to make society and conversation agreeable. Further, there can be no greater annoyance than to have to call in an expert when your lamp smokes or you are suffering from headache when you have stayed long in a crowded meeting. There is no small pleasure in solving life's little difficulties ourselves and all aids to this end are therefore extremely welcome. The mass of information of this kind contained in the four hundred and odd pages of "Enquire Within Upon Everything" is truly prodigious; and covering, as it does, every department of knowledge that has a bearing on the necessities of domestic life, it is no wonder that the book has run through ninety-seven editions. No more testimony of the usefulness of the book is required than the sale up to date of the enormous number of one million two hundred and ninety one thousand copies. We would say that no one who could afford Rs. 2 should be without a copy and no parent should lose time in placing the book into the hands of his children.

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*The Kayastha Samachar* begins its new year with considerable improvements. The January and February numbers are brought up in one volume and the size has been made more handy. We trust Mr. Sinha, the energetic editor, will keep the journal in its present level.

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## Books Received.

### BLACKIE AND SON LTD.—

- A New Sequel to Euclid in three parts by W. J. Dilworth, M. A., T. C. D. ... ..
- A Brief Survey of British History by G. F. Warner, M. A. ... ..
- A School History of English Literature by Elizabeth Lee. (2 vols.) ... ..
- The Palmerston Readers 1st, 2nd, 3rd, 4th, 5th, and 6th Books. ... ..
- Specimens of English Prose from Malory to Carlyle selected by Bertha M. Skeat Ph. D.
- Palmerston Readers, Primer I. ... ..
- Introduction to Shakespeare by Edward Dowden.
- Passages from Modern Authors for Class Reading by John Downie M. A. ... ..
- Palmerston Sight and Sound Primers for Infants I and II. ... ..

### GRANT RICHARDS, LONDON.—

- Rectorial Addresses delivered before the University of Edinburgh 1859—1899 Edited by H. Stoddart Walker ... ..

### GEORGE ALLEN.—

- Thoughts from Ruskin, chosen by Henry Atwell.

### SWAN SONNENSCHN & CO., LTD.—

- Problems in Education by W. H. Winch B.A., ...

### MACMILLAN & Co. —

- The Origins and Destinies of Imperial Britain by J. A. Cramb, M.A. ... ..

### SRINIVASA VARADACHARI & Co.—

- The Tragedy of Julius Caesar by Mark Hunter with an Introduction by F. W. Kellett ...
- Othello, the Moor of Venice, edited by Michael MacMillan with an Introduction by F. W. Kellett ... ..

### T. & T. CLARK.—

- Buddha and Buddhism by Arthur Lillie, M. A. ...

### ADAM AND CHARLES BLACK, LONDON.—

- On Sanitary and other matters by George S. Keith, M.D.; LL.D.; F.R.C.; R.E. ... ..

### THE CLARENDON PRESS.—

- The Oxford Book of English Verse 1250—1900 chosen and edited by A. T. Quiller Couch, Crown 8 vo. top edge gilt ... .. 7/6

### OLIPHANT ANDERSON AND FERRIER.—

- Great Books as Life Teachers: Studies of character, real and ideal, by N. D. Hillis. ...
- China's only Hope: An appeal by her greatest Viceroy Ching Chih Tung ... ..

### THE INDIAN PRESS, ALLAHABAD.—

- Quatrains by Prof. J. G. Jennings ... ..

### GEORGE NEWNES LTD.—

- Celebrities of the Army ... ..

### BLACKWOOD AND SONS, LONDON :—

- The Calender of Empire, by Jan, Malcolm M. P. ...

### Topics from Periodicals.

#### THE HELPING HAND IN EAST LONDON.

The East London of to-day is not the East London of twenty years ago, identified with so much of degeneracy, so much of horrible struggle for existence, so much of foul slums and pigsty. On the other hand, it is a city of quiet industry with long lines of clean streets and clean houses. Some of the greatest forces in the direction of philanthropic altruism and true charity, of modern times, which are spreading and taking root in that city have arrested all iniquity, and civilized the people to a perceptible degree. Such is the conviction with which one rises from a perusal of an excellent article in the February number of the *Century Illustrated Magazine* from the pen of Sir Walter Besant. The work of the clergy, supplemented in many ways by the Board school, has made the children of to-day in every respect better than those of twenty years ago. Besides, there are clubs which are simply invaluable, because they do a great deal for the moral advancement of the young people. As for arrangements for the sick we doubt whether any city has so many hospitals, in proportion to its population, as London. Among the organisations must not be forgotten the fraternities for mutual assistance called the Odd Fellows, the Foresters, and the Hearts of Oak. For the women, a very large society is that called the Metropolitan Association for Befriending Young Servants. Last but not the less important, is the Settlement, the root idea of which is the teaching and the cultivation of what we may call the life of culture among the working classes. And by far the most effective machinery among the lowest people is the Salvation Army and Mr. Besant testifies, in the strongest terms, to his belief in the efficacy of its work. The following excerpt may be taken as a sample of the strain in which he writes:—

To receive the discharged prisoners, to find them employment, to train lads to steady work, to give back to the soil the wastrels who were devouring and spoiling honest men's goods in the cities, to restore to a man his pride and his self-respect, to redeem him from his degradation and from the prison stain, which is as fatal as the jail-fever of old, to give him back his manhood, to fill him with new hopes and a new purpose—all this is surely a great and noble work.

#### HALF A CENTURY'S PROGRESS.

The *Canadian Magazine* for January contains the first of a series of articles on the above subject from the pen of Mr. John Reade, F. R. S. In this paper, the writer describes in an instructive manner the revolution that has come to pass in the various religious movements and institutions of the world

during the last fifty years. It is noteworthy that the period under review began and ended with a World's Fair. The inaugural world-gathering of 1851 by England marked the starting point of the past half century; and it has fallen to France to follow England's example, to give the closing exhibition of the century which drew multitudes to Paris during the last year. But, it would be seen, that the promise of the first World's Fair, had but meagre fulfilment. "From the summer of 1853, wars and rumours of wars have not ceased to harass the earth." What a sad commentary on the "kindly yearnings of 1851"—that a gathering of the nations "so apparently inspired by good will and the love of peace was so quickly followed by a desolating war!" However, the problem of the unity of Christendom need not be given up in despair. As we examine the movements of every imaginable origin and aim, with closer eyes, we find that there is a tendency toward "Union, amalgamation and co-operation." Among the most remarkable movements for the unity of Christendom which is a prominent feature of the last half-century was the Vatican Council convened by the late Pontiff, Pius the Ninth, in 1867 which gave the signal for a movement, which left no part of the Christian world unaffected. What are known as the Lambeth Conference or Pan-Anglican Synod, the Pan Presbyterian Alliance, or more properly, the Alliance of Reformed Churches, the World's Christian Temperance Union, the Epworth League, the Church Army and several others of general or special, religious or moral aims have done much to bring members of all Christian communities into co-operation. But these, perhaps, sink into insignificance when compared with that wonderful organisation, the Salvation Army, whose efforts have taken many forms; while it is impossible to enumerate other specialities of Christian work mentioned by the writer. The deliberations of the Parliament of Religions held at Chicago in 1893 composed of "Jews, Turks, Infidels and Heretics" to whom were added representatives of Buddhism, Shintoism, Confucianism; of the Brahmo Samaj, of the Moslems and Theosophists of the New World, marked the culmination of the unitary tendency of our time. These manifestations of the desire to draw closer the bonds of amity and general intercourse give us a true test of the point of development at which mankind has arrived and, whatever they may imply for the years to come, "they all bear witness to that prevalent note of our age which no historian can ignore", namely, the aspiration after a reign of universal peace.

## THE UNIVERSITIES AND THE ARMY.

The *United Service Magazine* for February contains much matter of interest to military readers. The above is the title of an important article by Captain A. K. Slessor whose knowledge of his subject seems thorough. He points out in a business-like manner the conditions, governing the appointment of members of the Universities to commissions in the army, which have undergone considerable alterations during the past half-century. In the early sixties, graduates were gazetted direct to their regiments on obtaining degrees; when the supply began to outgrow the demand, the commissions available were awarded on the results of competition among the candidates at the examination for admission to Sandhurst and the successful candidates entered the Royal Military College and went through the same course there as the ordinary cadets. This system was abolished at the end of the last decade when it was considered no longer desirable that University candidates should pass through Sandhurst, a decision which the increasing demands upon the accommodation at the Royal Military College made, perhaps, inevitable. But the latest strings of conditions to be fulfilled present "a problem extremely puzzling to many a candidate and entails much further enquiry, expense and difficulty". In the first place, the University candidate has to satisfy the doctors at medical inspection and candidates cannot be medically inspected until after they have successfully competed for one of the vacancies at the "literary" examinations which is nothing more or less than the Sandhurst Entrance Examination, which takes place every June and November. Some slight knowledge of mathematics is necessary, but practically any subject can be taken up that boys are taught at school or college. This examination is competitive. Formerly, instruction in drill and military subjects was given at Sandhurst. Now the "War Office disclaims all responsibility for imparting instruction in these matters," leaving the candidates to learn them for themselves by "private coaches" or by the aid of "crammers". The University candidate before he can reach his commission has to fulfil the following conditions:—

- (1) He must reside at a University. (2) He must pass Moderations. (3) He must then become "a successful candidate" at the competitive "literary examination." (4) He must satisfy the doctors at medical inspection. (5) He must pass the "military examination." (6) He must be appointed to a commission in the militia or volunteers. (7) He must obtain a Proficiency certificate. \* \* \* \*
- Undoubtedly the present system leaves much to be desired. A single year at Oxford or Cambridge cannot be said to constitute a University education. The candidates do not get their commissions until after two or

three years later than their contemporaries at school who have entered the Army through Sandhurst, whereby their prospects of rising in their profession are very seriously compromised.

After some excellent common-sense reflexions and sound reasoning that would lose interest by compression for the purposes of a summary here, the writer suggests the following solution which involves somewhat drastic changes. Briefly it is this:—

Let the first four conditions (enumerated above) stand and the procedure remain as it is at present, up to the completion of the competitive literary examination or rather of the medical inspection.

After that wipe out the remaining conditions, and instead

- (1) Gazette the successful candidate at once to a probationary commission. (2) Let him remain at the University and take up the subjects of the military examination as part of his examination for a degree. (3) Postpone all compulsory learning of drill until the probationer has joined his regiment.

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## UNCLE SAM AS A BUSINESSMAN.

In the course of a very instructive article on "Uncle Sam as a Businessman" published in the February number of *The Chautauquan*, Mr. Richard J. Hinton thus refers to the great service rendered by the Department of Agriculture in the United States:—

It costs annually about \$4,000,000, yet the weather bureau alone pays this back three times over to the people in direct service. Crops are saved. Shipping is protected. Life in a hundred ways is made more endurable. Its warnings and data grow daily in value. Stop and think for a brief space of the gain that is made in public health by the constant vigilance exercised through the bureau of animal industry alone. Its inspection of food, and the consequent improvement in health, has long since paid back, if such service can be reckoned in cash alone, every dollar that the department of agriculture has cost the nation. One lot of imported apple seeds, with the instruction given the orchardist, has added nearly a score of millions in value to the annual fruit crop of the land. The importation of an insect by the entomological division saved the citrus fruit trees of California and Florida and protected thereby ten millions of commercial values per annum. The pomologist and botanist are constantly helping the increase of new food products. The grasses and soils are being so studied that hopeful increase in all land and crop values is everywhere apparent. It will be impossible to give anything like a fair review of this once denied service in the dwindling space at command, but this reference to "Uncle Sam" as a promoter of agriculture would be marred even in its narrow proportions, were it to pass the growing forest development, the important irrigation investigation, or the increasing work of the experiment stations and the department's friendly and helpful supervision thereof. One of the greatest factors is found in the division of chemistry, where, under the present able chief, the valuable sorghum and beet-sugar interests have been so largely developed. The bureau of



statistics, with its 400,000 crop reporters, mostly volunteers, is a power for industrial promotion in many ways. Taking them all in all, there is no more useful or able corps of helpers in "Uncle Sam's" great industrial, technical, artisan, and clerical army of 200,000 than the efficient, though poorly paid, division chiefs and their immediate helpers in this one department. It represents most clearly the lines of practical and associative amelioration and industrial co-operation which free government, in this age of economic inter-dependence, when men are even sometimes disposed to set the security of the bread basket above the maintenance of political liberty or civic freedom, is, despite of adverse policies and theories, constantly tending to produce.

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#### BRITISH CAPITAL IN RUSSIAN INDUSTRIES.

There are several in India who hold that the problem of the industrial development of this country is beset with the greatest difficulty by reason of the long start which industries in other countries have had. That foreign competition has a tendency to crush out of the market the products of infant Indian industries may be admitted, but the situation does not seem hopeless, if the problem is attacked in the right fashion. What this method should be will appear from the following passage from an article on "British capital in Russian Industries" which Mr. Somerset Lister, M. L. C. E., has contributed to the February number of the *Chambers's Journal*. He says:—

If we enquire into the inception and growth of manufacturing industries in Russia we shall find that the underlying causes were of an inverse character to those which contributed to the development of our industries. An historical comparison of Russia's cotton industry by far the most important—with that of Lancashire will serve to illustrate this point. Dating from the inventions of Arkwright, Crompton, and Hargreaves, in the later half of the eighteenth century, our modern cotton-machinery is the product of a slow evolutionary process of improvement based on practical experience, gradually reaching its present state of perfection, and enabling Lancashire to become the chief source of the world's supply of cotton goods. The institution of technical schools in Lancashire for the scientific study of the various processes of this and kindred manufactures has been the result and not the cause of this perfection. On the other hand, it may be said that Russia owes her industrial progress to the existence of her fine technical schools, based on the German model, which, year by year, have turned out highly-trained men, whose prospect of success necessarily lay in the development of their home industries. It was on these men that the peasant-merchants of Moscow—in many cases enormously wealthy, but lacking the education necessary for self-guidance—relied for their investigation of the manufactures of Western Europe, the importance of which was continually demonstrated by the increasing yearly importations of manufactured goods. The cotton industry of Lancashire received their particular attention. A constant stream of engineers visited the mills and workshops of this country annually; and their careful and exhaustive training enabled them to readily assimilate the results of their investi-

gations. Their return was followed by a demand for cotton machinery, which was eagerly welcomed by British commercial houses in Moscow, through whose agency our machinery manufacturers were introduced to a rapidly-increasing and profitable market.

Many difficulties had to be overcome before this new industry was successfully established, as skilled labour was actually non-existent; with the result that scores of capable English mechanics found remunerative employment in the erection of machinery and the instruction and supervision of the native workmen. Russia, then, has been able to adapt a perfected method of production for the supply of her needs. For this method she is entirely indebted to Lancashire sources; and so important has her industry become that it now ranks second only to that of England.

To put the matter briefly, the main lessons which India might take from the methods adopted for the development of the cotton industry in Russia are:—

- (1) establish technical schools which shall turn out 'highly trained men'
- (2) import "capable mechanics" from abroad and employ them to erect your machinery and *instruct and supervise* the workmen.

These are the first steps in any scheme for the industrial development of India, if we are to succeed.

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#### METHODS OF ART-TEACHING.

In the course of an article in the *Art Journal* for January, Mr. Walter Crane observes:—

Naturally in a time when scepticism is so profound as to reach the temerity of asking such a question as "what is art?" there need be no perceptible shock when teaching. As important witnesses in the great case of the position of art in general education, or *commercial interests*, 1. *the expansion of the human mind and the pleasure of life*, methods of art-teaching have to be put in the box. What do they say?

Well, have we not the good old (so-called) academic method always with us. The study of the antique by means of shaded drawings, stumped or stippled "up to the nines"—if not further leading on to equally elaborate life-studies, which somehow are expected to roll up the impressions of eight, ten, or more sittings into one entirety and wonderfully it is done, too, sometimes.

Are we not led to these triumphs through the tiresome defiles of "freehand" and "shaded drawing" from the cast, perhaps accompanied by cheerful "model-drawing," perspective puzzles, and anatomical dissections, and drawings from the antique, which seem to anticipate the Röntgen rays?

"The proper study of mankind is man," but according to the academic system it is practically the *only* study—study of the human frame and form isolated from everything else.

No doubt such isolation, theoretically at least, concentrates the attention upon the most difficult and subtle of all living organisms, but the practical question is, do these elaborate and more or less artificial studies really give the students a true grasp of form and construction? are they not too much practically taken as still-life studies and approached rather in the imitative spirit? Then

again, such studies are set and pursued rather with the view to equipping the student with the necessary knowledge of a figure painter. They are intended to prepare him for painting anything or everything, and generally, now, *anything* but something classical that can be comprehended or classified as "an easel picture," that is to say, a work of art not necessarily related to anything else. It is something to be exhibited (while fresh) in the open market with others of a like (or dislike) nature, and if possible, to be purchased and hung in a gallery, or in the more or less darkness of the private dwelling "to give light unto them that are in the house."

Works of sculpture—or modelling as she is generally practised may not fare any better, privately, in the end when one remembers the bust placed back to the windows or the marble statue forced to an unnatural whiteness by purple-velvet hangings, but certainly the methods of teaching seem more in relation to the results.

To begin with a sculptor's or modeller's figure—unless a decorative group or an architectural ornament—is isolated and has no background, and it is undoubtedly a severe test of skill to model a figure in clay in the round from the life.

Some are of the opinion that its more difficult to model perfectly abasso-relevé, but there is no end to the work in the round. I am really inclined to think that *ever since the Italian Renaissance the Sculptor's and modeller's art as it aims have dominated methods of art-teaching generally*, and have had chief share in establishing what I have termed the Academic method, which seems mainly addressed to the imitation of solid bodies in full relief and projection of light and shade, which method indeed entirely reversed the whole feeling and aim of ancient and mediæval art.

In architecture, or the classical and Academic method, the young student is put through the five orders, and is expected to master their subtle proportions before he can appreciate their artistic value, and with but a remote chance of making such knowledge of practical value in a country and climate to which such architectural features are unsuitable.

Our methods of art-teaching have sailed along in this stately way from time immemorial. Do not Burlington House and South Kensington stand where they did? At all events a new spirit is abroad, since the arts and handicrafts of design have asserted themselves.

Methods of art-teaching in relation to these must at any rate be definite enough. Each craft presents its own conditions, and they must be signed, sealed, and delivered at the gate, before any triumph or festival is celebrated within.

Such conditions can be at least comprehended and demonstrated; materials can be practised with and understood, and even if invention in design can never be taught, on the negative side there are certain guides and fingerposts that may at least prevent lapses of taste and loss of time.

The designer may teach what different means are at his disposal for the expression of line and form, for the colour and beauty of nature, recreated in the translucent glass or precious enamel or speaking through the graphic printed line of colour of the wood-block—eloquent in a thousand ways by means of following the laws of certain materials in as many different arts.

What are the qualities of a designer in such arts? Quickness of invention and hand-power of directed definition of form. The expressive use of firm lines, sensitive appreciation of the value of silhouetted form and the relief and effect of colours one upon another, perception of life and movement knowledge of the growth of structure of plants, sense of the relation of the human form to geometric spaces, and power over its abstract treatment.

as well as over the forms of the fowls of the air and beasts of the field. This is a glimpse of the vista of the possibilities of teaching methods opened up by the arts of design, and in so far as those arts are understood and practised and sought after, as important and necessary to the completion of a harmonious and refined life, nay, I would say *human* life, as well as the intimate record and expression of national life, so will our methods of art instruction have to adapt themselves to meet those now old demands.

#### RUSSIAN POLICY IN MANCHURIA.

In view of the present situation in the Far East and the peace negotiations which have not advanced to any satisfactory stage, it may be of interest to draw the attention of the readers to the doings of Russia in Manchuria. A writer in the *Review of the Week* explains the situation in the course of a very lucid article and the following is an extract from the same:—

It must be remembered that, although the Press in general has adopted a tone that would lead most people to suppose the Manchurian provinces to have been already annexed by Russia, no formal annexation has actually taken place. On the contrary, Russian diplomatists would have us believe that Manchuria is still an integral part of the Chinese Empire, and will continue to remain so. They wish to convey the impression that the sole objective of Russia in Northern China is the maintenance of her ice-free port, and the protection of the railway system which connects it with other parts of the Muscovite dominions. Of course all this is mere bluff. Manchuria bristles with Cossacks under pretence of guarding the railway to Port Arthur, and the importation of ten millions of Russians to settle in the country does not in the least bear out the diplomatic assertions by which we are supposed to have been hoodwinked.

In fact, the whole thing was given away by the publication, in a telegram from Li Hung Chang, of the nine conditions of peace recently presented by the Russian representatives in Manchuria to the Tartar general at Shengking. After perusing these conditions there is no mistake about Russia's intentions. They are stated plainly enough; though they include certain hypocritical clauses which are obviously designed, in the first place, to save the face of China, and secondly to avoid giving any of the foreign governments direct provocation to interfere. There is also an undertaking on the part of Russia which sounds ominous at the first hearing, but of which the hollowness is revealed upon closer examination. These are the terms, Russia is to control both the Government and the military affairs of Manchuria; all fortifications are to be destroyed by the Chinese, and arms and munitions of war handed over to the Russian authorities, their manufacture being forbidden in future; and regular Chinese troops are to be prohibited from entering Manchuria, although China is to give adequate protection to the Russian railways. The whole Manchuria is to be restored to China, the Chinese Government being maintained in the three provinces. And finally, Russia binds herself to support China in case of war.

In other words, Russia has boldly announced her intention of assuming a protectorate over the enormous territories of Manchuria, which stretch from the Liaotung Peninsula to the Amur River on the borders of Siberia. The declaration that Manchuria will be restored to China and to Chinese Government is, of course, a mere

empty formality. It is an ingenious *coup* intended to disarm the other interested Powers. England or Germany cannot very well say to Russia, "It is all nonsense about your restoration of Manchuria to the Chinese; you have really annexed the country, and we insist upon having a slice of territory to balance our position." There is no formal annexation of the Manchurian provinces, though it does not require the eye of diplomacy to perceive that Russia is quietly swallowing up and Russianising the country, which she intends to place in such a relationship to herself that formal possession may be taken of it at any convenient moment. These are the methods of Russian diplomacy. They differ widely from our own system of straightforward, gentlemanly blundering; but they never appear to fail in their object—which is, after all the chief aim of diplomacy.

It will be urged, however, that the ninth clause, which asserts Russia's obligation to support China in the event of war, looks more like business. Here is, apparently, a real challenge flung down before the other Western Powers who claim to be equally interested with Russia in the development of the Far East. The Anglo-German agreement seems to be regarded by Russia with contemptuous indifference. If China chooses to declare war against us, or we should find it necessary, in carrying out the objects of our understanding with Germany, to make war upon her, Russia is ready to pledge herself to support the Chinese. It all sounds very reckless and defiant. But we have only to dive beneath the surface to discover the innocuousness and hallow pretence (as far as Russia's attitude towards China is concerned) of the whole scheme. This militant proposal on the part of Russia is not a menace to Europe; it is simply a revelation of Russia's paramount influence at the Chinese court. Russia can well afford to guarantee China her support in the event of war, when the making or prevention of hostilities by the latter is dependant upon the advice of the former Power. That is all the meaning that need be attached to a clause which is not really of the slightest significance. It is simply a diplomatic pretence of identifying the interests of China and Russia in the Far East. The Chinese will be no more deceived by it than the governments of other Powers. Russia knows the almost indecent cleverness of the Chinese statesman far too well to expect to blind the Central Government to the truth. The language has been simply arranged to enable the Chinese to keep up the necessary amount of pretence; and although the proposals may be regarded with disfavour now, when their acceptance is ultimately enforced China will lose, thanks to Russian delicacy and the unlimited capacity of Mandarin lying none of her dignity for time-honoured conceit.

A great outcry is made on all these occasions by those who have commercial interests at stake in the Far East. It is urged that the British Government should make a definite stand and clearly notify the Foreign Office at St. Petersburg that we cannot permit Russia to acquire territory in Northern China. These interested men of business altogether overlook the fact that the British Empire has other and greater trade interests besides those which happen to concern themselves. Our trade in China is certainly paramount, but it is a small item in comparison with the foreign trade of the United Kingdom with other countries. We cannot afford to quarrel with Russia about the occupation of territory in Northern China, as long as our Indian Empire is not menaced thereby. The purely trade question must go overboard. It is too insignificant by comparison with the upheaval of commercial interests

which would result from a war with Russia. The British Government has been lax enough in the conduct of our policy in China, but, thank goodness, it has had enough commonsense not to quarrel with Russia on account of her design on the Manchurian provinces. When the Russians propose to annex Tibet, or the French threaten our Burmese frontiers, it will be time enough for us to talk of mobilising.

#### BRITISH DEMOCRACY AND BRITISH EMPIRE.

From the article on the "Growth of Democracy" in the current issue of the *Indian Review*, our readers will notice how the democracy of the British Empire has been built up and how England presents an almost unique instance of a State with a government fast approaching the ideal of a democracy. To the January number of the *Dawn*, Mr. A. C. Chatterji contributes a thoughtful article on the "British Democracy and the British Empire." The author states the pros and cons of the problem of the Federation of the British Empire. The question of Alien emigration and particularly immigration of Asiatics into the colonies which the colonies seek to solve by introducing considerations of caste, creed or colour, threatens to make all hope of a future federation improbable. Though the possession of prosperous colonies contribute to increase the prestige of England, the latter derives not much direct financial benefit from the colonies. On the other hand, the suzerainty of England frees them from all anxiety concerning their external affairs and the trouble and expense of maintaining an army, and no English statesman has hitherto exercised his right to tax the colonies since the unfortunate example of the Stamp Act. That the colonies exist for the benefit of the mother-country is an exploded theory and political science has not yet suggested a better theory of colonisation to improve the present relations between the parent country and the other parts of the empire. The idea of Imperial Federation has not taken any shape till now and when that question comes to be seriously considered, possibly in the remote future, and when dependencies and colonies and the mother-country are to be welded into a homogeneous empire, the current of favourable circumstances just then will have to be inevitably reckoned with.

An important article in the *Christian College Magazine* for February is the one dealing with "Some Questions of South Indian Ethnology" by Mr. C. Hayavadana Rao, B.A. The article has in it sufficient facts to make it worth reading but, to do it justice, it would need a longer review than we can find space for.

## DEPARTMENTAL NOTES.

## Educational.

(By a Head Master.)

## TECHNICAL EDUCATION.

THE resolution of the Madras Victoria Memorial Committee to devote the greater part of its funds to Technical Education in co-operation with the Technical Institute already in existence, has met with opposition in certain influential quarters. This opposition is based on the intelligible ground that hitherto, notwithstanding a large amount at its disposal, the Institute has done almost nothing, except of course paying an idle establishment. This inactivity is due in part to that universal foe of Indian organizations, apathy. In the matter of the Technical Institute this foe has found an equally powerful ally, ignorance. If nobody cares and nobody knows, the result must be *nil*. There has been a babel of talk and a wilderness of writing on the subject; but nothing at all approaching certitude has been arrived at, and no expenditure of public money can be justified unless it be based on a definitely formulated, largely accepted scheme.

But this fluid condition of opinion in the sphere of Technical Education need not be permanent. Even if we may not trust the enthusiasm that will subscribe for the project to evolve a definite plan of works there are indications that the problem will be solved for us elsewhere. Lord Northcote's Convocation Address at Bombay is full of suggestions likely to prove fruitful in the field of Technical Education, and it does not seem too much to infer from His Excellency's speech that we are on the eve of the inauguration at Bombay of a state-conducted system of technical education. He mentioned in particular Scientific Agriculture, Engineering and Commerce in general, as branches of learning to which the Bombay University might well give its recognition. Agriculture seems already to enjoy University recognition, whereas Engineering does here. In Madras, however, attempts have been now and again made, though without success, to introduce agriculture and commerce within the University portals. But if the University should feel, as it might not unreasonably feel, that a recognition of commerce and agriculture would lower its dignity and narrow its scope, there is no reason why the state or the Victoria Technical Institute should not adopt the suggestion and carry it out; for, notwithstanding a recent viceregal pronouncement in disparagement of a "batch of institutes,

or a cluster of polytechnics" the problem of Indian poverty does seem to be soluble only by a thorough and well-planned system of training in the practical arts and industries of life.

## VERNACULAR EDUCATION IN BENGAL.

An important resolution of Sir John Woodburn's Government remodels the whole system of Primary Education in Bengal, and it is refreshing to observe the whole question argued with a breadth of view and freedom of thought that one would like to see in Local Educational G. O's. The bogey of *mamool* does not appear to have any terrors for the Bengal Government, and the reforms proposed are adopted with earnestness and not deprived of all point by numerous concessions to conservatism and exemptions to unwillingness. There is no plan so wise, but some well-meaning and sensible people will oppose it; and if, out of deference to their views, the plan be not urged with a whole-hearted devotion, but damned with faint praise, it is practically fore-dooming it to failure. Witness the advice recently given by the Government of Madras to all managers of schools to adopt the Vernaculars as media of instruction in all non-language subjects in the Lower Secondary Department,—advice which has yet remained barren of effect, and which, for a wonder, the Department of Education itself has not thought fit to follow in schools under its management! Witness again the removal of Geometry and Algebra from the curriculum of studies in the third form, a wise measure of which, however, the purpose is defeated, as the Department knows only too well, by the retention of these subjects in the syllabus of the Lower Secondary Examination, which is still generally regarded as the end and aim of the instruction in the third form. Far other is the spirit of the Bengal Government's Resolution regarding Vernacular Education. Bold in its enunciation of policy and resolute in its adherence thereto, it is yet cautious in the manner of its adoption, wisely fearing to risk by undue haste the success of the new measures from which great benefit is ultimately expected. Two features of the new scheme are so well-marked as to merit reproduction.

## THE KINDERGARTEN SYSTEM.

One is the complete reliance placed upon the Kindergarten System when it is adapted to the circumstances and conditions of this country. It is recognised as the best and truest method of training and developing the intelligence of children. Only Froebelian gifts are to be discarded, because they are costly and do

not appeal to Indian children so readily. Objects found in every village and in every school-house are to be selected for the exercise of the children's powers of observation, reasoning, and description, while habits of accuracy and obedience will be inculcated by the process of stick-laying, and simple physical exercises and action songs. The present writer has, in a former issue of this *Review*, referred to the difficulty of obtaining a race of teachers competent to work this system with profit. The same difficulty is felt by the Bengal Government, but is not considered insuperable. "It is almost certain that the teachers will teach the new subjects badly, but what is contended is that the teaching cannot be worse than the present entirely mechanical system of training the memory, whereby all the other faculties are dulled at the expense of the monotonous parrot-like exercises. It is urged that bad teaching with a good educational system will produce better results than bad teaching with a bad and unsound system."

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#### VERNACULARS, NOT ENGLISH, IN THE LOWEST CLASSES.

The second point is the emphatic condemnation of the practice of teaching such subjects as History and Geography in English in the lowest classes. The part of the Resolution dealing with this practice deserves to be quoted here, as the remarks will apply with only slightly inferior force to the same practice largely prevalent in Madras in the Lower Secondary classes:—

"In plainer words a child is taught the rudiments of Geography and History through English sentences and English explanations before he has mastered English sentences for himself. It is not surprising that this system has been found to be perfectly disastrous to the sound instruction of the pupils in the English which their parents want them to acquire. The excuse for it lay in the belief that a child could not begin English too young, if he was to be a proficient in the language, and that it is a waste of time to teach him rudiments in his vernacular and the higher stages in English. The experience of even a few years has shown this belief to be entirely false. The child gets his instruction from a master of the lowest class; his instruction is a matter of rote, and not of intelligence; and his English is of a type from which it never recovers. This most pernicious plan was begun in private schools, it has extended to the Government high schools and aided schools, apparently from the fear that they would lose pupils if they did not follow suit. No proper investigation of the merits of the two systems appears to have preceded the change of basis, and certainly no formal sanction from the Government has ever been given to the system of teaching children in a foreign language from practically the earliest stages of their instruction. The teaching in the lowest classes of high schools through the medium of English was formally considered and formally condemned at a Conference of the Inspectors of Schools which sat early this year, and by which a return to the former vernacular basis of instruction in the lower classes of such schools was advocat-

ed. In Sir John Woodburn's opinion the Conference were altogether in the right. He has himself been greatly struck in visits to these schools by the frequent inability of the scholars to explain in their own language the meaning of what they read. A system which debars young students from an early training in their own vernacular cannot but be wrong. Where instruction is given from the very commencement of a child's attendance at school in a foreign language the result could only be what it has proved to be—that the pupils learn merely by rote without, in most cases, obtaining any intelligent grasp of the meaning of what they are being taught; and if education is to be on a sound basis, we must revert without delay to the system from which we have so rapidly and almost unconsciously departed. In all Government high schools the medium of instruction in the lowest classes will hereafter be in the vernacular, and this will be a condition of aid to the aided schools. Over private schools the Government has no control, but the Lieutenant-Governor hopes that they will, in loyalty to their own vernaculars, follow the example that has been set to them, and as an encouragement to that end, he directs that students in the lower classes of High and Middle schools, corresponding in educational standard to similar classes in Middle and Primary schools, shall be allowed to compete for Middle and Upper Primary scholarships, on the same terms as students in Middle and Upper Primary schools. There is at present no examination for such scholarships in the lower classes of these schools, and he hopes that this new privilege will form an effective incentive to the adoption of a system which appeals alike to experience and patriotism."

#### MADRAS MATRICULATION SCIENCE.

Dr. Wilson concludes his article on the above subject in the current number of the *Educational Review*. He accounts for the great variation in the Science results from year to year, which, by the way, is not greater than that in the English results, by three causes: incompetent examiners, ill-prepared students, and the varying proportion of testing to easy questions in the papers set. In the matter of examiners Dr. Wilson's suggestion is that those that value accurately should be appointed, for lengthened periods, and the Syndicate should abandon the principle of 'giving everybody a turn.' This will be more comforting to the in's than to the out's. The doctor likewise prefers teachers for the work of valuation, other persons generally showing an utter incapacity to estimate the attainments of candidates. This partiality for the profession to which he belongs may be accepted in some quarters as an atonement for the condemnation under which in the former part of his article he brought the generality of Science masters in high schools. The second of the causes, viz., the ill-preparedness of the great majority of the candidates is as true as it is serious and must be traced to the large numbers that are taught, together in most schools. In fact this and the kindred evils of indiscriminate promotion and universal admission have assumed such alarming proportions that we should have liked persons like Dr. Wilson to go into the matter more deeply and point out the

sore spots with admonitory finger. With regard to the nature of the questions, the doctor thinks it mistaken leniency which makes examiners ask such questions as can be answered by a mere study of the books in use. The world of school-masters and school-boys think otherwise; and the doctor may perhaps feel disappointed that even the Senate seems to share this opinion by its recent resolution to abolish the separate minimum for Science. There is scarcely any doubt, however, that the educational value of science-teaching is absolutely *nil*, if suitable experiments are not performed before the class; and one can sympathise with the Science Professor who while enunciating such an axiom in method, should be considered as recommending a counsel of perfection. Verily, Science is fallen on evil times!

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**Legal.**

By A High Court Vakil.

THE SECOND APPEAL BILL.

Without exaggeration one might correctly state that the object of the bill is to minimise the chances of litigation. Is it a healthy standpoint for any Government to take up? It seems to have been assumed that there is more litigation than the country needs; and the Executive Government is finding the means by which this litigation can be smothered. Has any attempt been made to compare the average per cent. of litigation in India and in other civilised countries? Has it been ascertained to what extent the negligible factor in a litigation going up to second appeal represents substantial possessions for an ordinary ryot in this country? If the subject matter in case of money is below Rs. 1,000, there ought to be no second appeal. If the landed property involved in a suit is less than Rs. 200 in value, there ought to be no second appeal. Out of a population of 300 and odd millions in India, 99 per cent. cannot boast of properties worth more than 200 to Rs. 1,000. The rights of all these persons to come up to the highest court in the Presidency are to be restricted: And why? Is it because the Government wants to cut down the number of judges? It looks as if the object is to give relief to the Exchequer. We are afraid it is a very false step that is being taken. The Government may carry the day, as they have often done, against the wishes of the people. But there is no denying the fact that the Government will be understood to have curtailed the rights of the people to have their rights adjudicated upon by the proper tribu-

nals, because a saving is wanted in the expenditure. There are other very objectionable features in the new bill and we are glad that our contemporary, the *Madras Law Journal* has drawn attention to all of them. We are glad to know that the judges of the Madras High Court are opposed to the provisions of the bill, and we hope that the Viceroy will see his way to drop the measure altogether, as he did in the case of the Press Messages Bill.

LAWYERS AS GENERALS AND *vice versa*.

Our contemporary, *The English Law Journal*, examines the career of some eminent Lawyers and of some famous Generals and comes to the conclusion that if these gentlemen had exchanged places, their services to humanity and their place in the world's history will remain unaffected. It used to be said of Lord Russell of Killowen that he was the Napoleon of the Bar. No comparison can be more apt than this. Lord Russell was every inch a leader. Quickness and decision were his prominent characteristics; and he stood head and shoulders over his compeers in the profession. This is what our contemporary says:—

Like the general, the lawyer, too, knows that the paramount object is to win, subject to the rules of the game, war game or law game, and that all tactics are to be subordinated to this end.

The old English justiciaries are notable instances of how arms and the toga may go together. Chief Justices Odo and Fitz Osborne, Geoffrey and Fortescue, were all skilful campaigners, and as well able to lead a charge on the battle field as to preside on the Bench. Sir Matthew Hale trailed a pike in the Low Countries. Lord Erskine and Sir William Grant both did some soldiering before they rose to the highest dignities of the law; and very likely the experience helped them. Lord Eldon would doubtless have made another Fabius Cunctator. And what of Washington and many another fighting President of the United States?

Lord Brougham and Lord Campbell were both men who would have made able generals. Conversely, the soldier Raleigh, as he showed at his trial, would have made an admirable lawyer; so would Julius Cæsar, and Hannibal, and Cromwell, and Napoleon. Napoleon shall indeed, be reckoned among lawyers; did he not exclaim, "I may, go down to posterity with the code in my hand?" It is in its presiding genius that the true greatness of the general and of the advocate discovers itself; not in the wrangling of *Nisi Prius* or in petty skirmishes, marches, and counter-marches, but in the calm survey of the whole field of action, in making everything co-operant to the main design. This is the fine picture which Addison draws for us of the Duke of Marlborough on the field of Blenheim, and it has its counterpart in the genius of the consummate advocate.—*Law Journal*

THE RELIGIOUS ENDOWMENT BILL.

So, between unreasonable conservative opposition and illogical Government callousness, the Hon'ble Mr. Anandachari's Bill was killed: Bengal is responsible for the whole of the mischief: superstition has gained

the victory over honest and god-fearing religious faith. The Mahunt is supreme in enlightened Bengal and whenever attempts are made to eradicate the abuses connected with his management of trust funds, a howl is raised that religion is in danger. Religion here can have but one meaning and that is "the rapacity of the trustee who by being nearer to God is undoubtedly farther away from him." This senseless cry is taken advantage of by Government apologists. They preach the sermon of religious neutrality. Never were the words of the gracious proclamation of the late Empress perverted to a worse use than in this matter. Government will not be interfering with Hindu Religion by removing peccant trustees from their post. Hindu religious instinct will not be outraged by a sanctimonious Guru being cashiered for having systematically robbed both God and man of their dues. Hinduism nowhere enjoins that a trustee, however unholy and however bad, should always go unpunished. Nobody knows better than these apologists of Government that the Government will not be accused by reasonable men of interference with their religion by their lending their aid to set right the abuses in our religious institutions. Eminent lawyers like the late Sir T. Muthuswami Aiyar—conservative in religion, in politics, in law and in social intercourse—were strongly of opinion that legislation should at once be undertaken by the Government in this matter: and yet we are seriously told that what hampers the Government is the fear of wounding the religious susceptibilities of the people of India. We are sorry to say it—but the opinion is gaining ground—that it is because the Government is indifferent that such measures are not allowed to become Law.

#### THE TRAVANCORE RELIGIOUS ENDOWMENT BILL.

We are sorry that this excellent measure has been rendered almost useless by the amendments and omissions which its provisions have undergone. We are inclined to think that the bill as finally suggested will not serve any useful purpose. Practically the trustees of the bigger endowments have been constituted the owners of the properties. It is a real pity that opinion in Travancore was not strong enough to insist upon all the trustees of every endowment being brought within the operation of law. Conservative opinion in Travancore has gained the day and real reform has been thwarted. Here in British India, the people of Madras are rendered powerless to bring to account erring and peccant trustees, because enlightened Bengal, as in the case of the Age of Consent Act, will not allow its Mahants and Takeshwars to be interfered with in their dealings with the contribution of honest devotees. We had fondly hoped that enlightened Travancore

will set an example which the British Government may be compelled to follow. But the late Dewan who led the opposition has had everything his own way.

#### LAW MAGAZINE AND REVIEW.

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- II.—The Romilly Society. Its objects and its work. By C. H. Hopwood, Q. C., Recorder of Liverpool.
- III.—Speculum and Mirror. By James Williams, D.C.L.
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#### Trade & Industry.

##### *By a Mercantilist.*

#### THE TANNING INDUSTRY.

Speaking as chairman of a meeting recently held under the auspices of the National Indian Association, Lord Reay urged the necessity of an industrial survey of India to decide what industries may be given up and what others may be started, revived, maintained or improved in the interests of the people of this country. Whatever may be the result of the suggestion and whether it is accepted or not by the Government, there is one industry in Madras which demands immediate attention by reason of its importance alike to the Government and the lower orders in this Presidency. We refer to the tanning industry which is fast dying out. Owing to the abundant supply of tanning materials available in the forests of this Presidency, Madras used to receive large quantities of untanned skins and hides from distant places in Northern India and the Panjab. These were prepared for the market in the tanneries established at Madras, Bangalore, Coimbatore, Trichinopoly and several other places. Until some years ago, the export trade in tanned skins and hides was enormous and the prosperity of the Madras tanner was proverbial. But now, tanning in Madras and, one may say, in all India is a decadent industry and it is computed that thousands employed in the line are fast losing their occu-

pation. What the causes of this decadence are, it is difficult to determine with precision.

Industrial progress has been a notable feature of recent times in the case of almost all civilised countries and each nation has begun to manufacture itself the articles which it formerly imported from abroad. This is a reason which has been assigned for the decline in British commerce generally and it is equally applicable to the tanning industry in India which occupied a prominent position in the world's leather trade until some years ago. It is only natural that the establishment of numerous tanneries in America and England should arrest the progress of the tanning industry in India.

A far more potent cause of the decline, however, appear, to lie in the fact that while the tanners in India have not yet given up or improved their time-honored processes their *confreres* abroad have not been slow to adopt recent inventions. Depilation, plumping, soaking in tan liquor and drying are processes which require weeks and months, and it may be mentioned that to make good, thick leather would, in some cases under the ordinary methods, take as long as fifteen months, the capital invested being all the while dead. The efforts of tanners therefore have been directed to reducing the time within which to get their products ready for the market. With this object every patentee has aimed at forcing the ooze through the pores of the hides and thus hasten the combination of the substance of the skin with the tanning principle. Considerable advance appears to have been made in this direction by the application of electricity both in England and America. In the former, two systems are in force, namely, the Worms-Balle system worked by the British Tanning Company and that of Groth in operation in London and some other places. Under these processes, the absorption of tannin per hour is 50 per cent. more than it is when the hides simply soak without mechanical agitation or the use of the electric current. Electricity is also employed for depilating the hides. while "by heating the water with electricity" the tannin is also extracted from the bark completely in half an hour against a period extending over many days under the cold soak method. A similar advance has been made in America by the invention of a secret process and the "chrome tannage" produces, in a much shorter time than the old process, a leather which for many purposes is preferred to that ordinarily produced.

Such then is the development of the tanning industry abroad. It is no wonder therefore, if, in the face of the improved methods, the Indian tanner is fast losing ground. Some of the Madras tanners met together a few days

ago and resolved to petition the Government to levy an export duty of 10 per cent. on all raw skins and hides sent over from this presidency. It seems hopeless to expect the Government to do as the tanners have suggested. But there is one thing which the Madras Government may do if it is only willing to help the Madras tanner really. A technical school in Madras where tanning and currying on modern lines may be learnt will be an excellent institution. There is nothing impracticable in the suggestion if only it is remembered that tanning is taught by a Professor in Yorkshire College, Leeds. The solution of the industrial problem, in India generally, depends on how far we are prepared to impart technical education on practical lines.

The people employed in the tanning industry generally belong to the lower classes and if they lose their occupation they will simply go to swell the ranks of those who resort to Government relief works in times of famine. The merit of the tanning industry consists in its being essentially a famine industry, as, in seasons of drought, large numbers of cattle die and thus the raw materials required become abundant. Thus, while the Government may hope to save some expenditure in the shape of famine doles, the revenue derived from the forests which supply the tanning materials may also improve. It is not unreasonable to predict that the State will be ultimately no loser by doing all it could to foster this industry and we sincerely hope that the authorities responsible for the spending of the Victoria Technical Institute Funds will devote their full heart to do something to improve the condition of the unfortunate tanners of Southern India.

#### A DISTINGUISHED INDIAN TANNER.

While on this subject, it may perhaps interest our readers to know some particulars about a native of India who has worked his way up as a leather-dresser and currier. We refer to Mr. K. E. Talati, the son of Mr. Edalji Dorabji Talati, B. A., the acting Principal of the Elphinstone High School, Bombay, and proprietor of the Minocheher Leather Works at Bandora. The story of Mr. Talati's taking to this particular line is interesting. Old Mr. Talati was employed as the Headmaster of the High School at Karachi. He had seen steam-loads of untanned skins and hides exported to England and America. Tanning was a good line, he thought, for his son who passed the Matriculation Examination in 1889. He accordingly apprenticed him to a Parsee firm of tanners, Messrs. Muncherji Shapurji and Co., in Bombay, where he worked for two years. The father wished his son to learn the finishing processes practised in England and America and with this object went to England to arrange



with some manufacturers there to instruct his son. But not one of them will even show the father over his works and only one consented to teach the son on some terms. Nothing daunted, father and son began to learn the finishing processes from books, spent a lot of money, made experiments and at last succeeded in making Roller skins, Morocco skins, Morocco hides, Russian leathers, enamelled leathers &c. There was at first some prejudice against the manufactures because they were native-made but gradually this difficulty has been overcome. Lord Curzon and Lord Northcote have complimented Mr. Talati on his enterprise and excellence of his work. Lord Northcote even ordered his Bombay coach-builder to purchase some skins and use them for his carriage. Morocco hides of Talati's manufacture are used by four Railways for lining their first and second class carriages. We should not forget to mention that Mr. Talati is the only person in all India who has passed the City and Guilds of London Institute examination in leather tanning and his factory is the only one in the whole of India laid out on up-to-date lines for the manufacture of Roller skins, Morocco skins and Morocco hides.

#### MR. WAGLE IN AN ENGLISH GLASS FACTORY.

Mr. Wagle's lecture on his experiences in an English Glass Factory is full of valuable lessons and should afford ample food for serious reflection by those who are in any way interested in the industrial development of India. It has hitherto been considered that one way of attaining the object is by sending intelligent young men to England and other countries there to learn in workshops and factories, the details in the construction and use of machinery and in manufactures generally. Evidently the advocates of this plan will have to re-examine their position. We referred above to the refusal of all but one of the leather manufacturers to admit Mr. Talati into their works, and the same story has to be told in the case of Mr. Wagle. Not even the business influence of the late N. N. Wadia exerted through his agent and the support of no less a person than Sir George Birdwood could avail. Application for admission to thirty firms was rejected on the ground that "it was too great a responsibility for them to take a "foreigner" into their works, and only one consented to admit Mr. Wagle on condition of his paying three thousand rupees as premium and even then confining himself to only one department of the works. It is difficult enough to persuade an Indian to go over seas to learn a trade and if to this were added heavy premiums with little prospect of admission, the position becomes serious. It is easy enough to advise that in spite of difficulties Mr. Wagle ultimately

succeeded; but if the story of his experiences may be believed, few young men could stand the trial and the factory-owners must be fewer still who, like Mr. Bibbey, could stand the strike of their workmen for admitting the 'foreigner.' It is usual to talk of Japan having attained eminence by sending out young men to learn manufactures abroad and instruct workmen at home, but there appears to be something more in the arrangement than what meets the eye. It may be that this method of raising the industrial status of India may be made easier if the Government would award liberal scholarships for technical education abroad and also bring its influence to bear upon the factory proprietors at home. Until then, the plan must be given up as impracticable except at a cost which is prohibitive for a private undertaking.

#### IRRIGATION *versus* RAILWAYS.

The question of the development of Irrigation *versus* Railways is a vexed question in India. It is therefore interesting to read the following remarks of the *British Trade Review* on the subject. Reviewing the progress made by the portion of the Punjab watered by the Chenab canal, the February number of the *Review* to hand speaks thus of irrigation projects generally, for India:—

This is, indeed, a record of which not only India may be proud, but to which the advocates of irrigation may well point as an example of what can be done by engineering skill and common-sense in rescuing vast districts from the influences of drought. Any schemes which result in providing food supplies for the people of a country must be supported by the authorities if they expect prosperity to abound and contentment to be maintained. We cannot afford to neglect India commercially; we cannot afford to make her a recipient of our periodical philanthropy, however well-meaning that philanthropy may be. We must treat India on a different basis in the future. Whenever it can be shown that she can be made prosperous by undertaking public works, such enterprises will have to be taken in hand. Red-tape, officialism and other impediments will have to give way, and India must be governed with some regard for its future, and not allowed to perish because certain things were good enough in the past.

#### Medical.

*By a Doctor.*

#### SCIENTIFIC STUDY OF CANCER.

In the February number of the *Humanitarian* Dr. Herbert Snow writes with considerable amount of vigour upon the group of diseases collectively known as "Cancer," and concludes with a strong plea for a more scientific study of this important subject vital to the health of the community. He complains of the neglect of this disease, without influential public and judicious medical co-operation, and

the gloomy figures of cancer-mortality, cited in the course of the article, clearly show that a more careful scientific study should be bestowed upon the causation and phenomena of the disease. Says the author:—

"In no respect is the dead weight of long-established, all powerful authority more heavy or more obviously powerful than in the question under discussion. The medical curriculum makes no provision for the special study of cancerous diseases. That would not, perhaps, matter so much. But can any one conversant with the schools and their traditions deny that almost from the first day he sets foot within their precincts, the student is taught to ignore and condemn the subject, to be content with the most perfunctory book-knowledge thereof, to regard 'Cancer' as a hopeless business, about which there is nothing to be practically learnt, and which the merest tyro is competent to treat?"

The first needful is, therefore, to persuade the average practitioner that there is something to be practically learnt about cancer. To initiate and enforce the necessary changes calculated to improve the curricula of medical education, to remove the defects in influential medical corporations, among whom there is a wide diversity of opinion on almost any point which may be named in connection with the disease, the influence of an outside wave of strong popular opinion is indispensable. To this end Dr. Snow suggests that there should be a General Congress—if possible an International Congress under the auspices of Government—of all interested in this pressing matter. The only obstacle, he thinks, is the expense, but no one can doubt that the experiment is worth trial and that the position of this class of disease should be reconsidered by the best intellects of the race.

#### SALT AND LONGEVITY.

Familiarity breeds contempt is an old saying, and it is perhaps owing to this reason that people in this part of India were inclined to ridicule the advice given some time ago by Dr. Yaman Baji that a free use of common salt was a good preventive of diseases generally. That salt had many virtues which are yet unrecognised was the theory of the German, Dr. Gumpert, and from accounts that we read from America, it would seem it is the new elixir. The latest theory is that it plays an important part in prolonging human life. Several American doctors declare that it is an easy matter thus to prolong life to one hundred years. It is said that injections of various phosphates have been used to great advantage on aged patients, many of whom have also been dosed with glycerophosphate of sodium and phosphoglycerate of lime and other chemical combinations. The New York correspondent of the *Morning Post* says that Mr. Hewitt, ex-Mayor of New York, having announced that his health and vigour had been marvellously improved since 1879 by injections of salt in the form of glycerophosphate of sodium, doctors all over the country have been making experiments with interesting results. A man of science in Boston has, by this means, revived insects which to all appearances had been dead for two days from drowning. Mr. Hewitt declares that when he began to take salt in this way he had no appetite, and could walk only with difficulty. He gained rapidly by the treatment and

has since continued it in moderation to preserve his vigour. He is now notably active for a man of his age, and can walk farther and with less fatigue than many young men. Physicians state that salt in many cases has the power of juvenating and prolonging life.

#### COFFEE AS A BEVERAGE.

Though the consumption of coffee is being promoted all India over, it would appear from a testimony borne by an experienced traveller in India that the Indian cook stands in need of the following clear instructions which we extract from *Health*:—

#### THE COFFEE BEAN

consists of woody fibre, gum, and aromatic oil contained in small cells, and every part of the bean contributes something to the mismanaged decoction. The bean when bought in the raw state always contains foreign matter and certain decayed beans which, if they are not carefully removed, will give an unpleasant taste to the beverage. All foreign matter must be carefully picked out previous to roasting, and it is here that the serious risks begin. The problem is to cook the woody and gummy matter without evaporating the aromatic oil, and to this end the temperature must be kept carefully below the boiling point of the oil. A few seconds of excess temperature will suffice to drive off this oil, and what remains is little better than burnt bread crust or date-stones.

#### THE GRINDING

may be done in a fine steel mill, but the best work is done in a porcelain or hard stone mortar which reduces the bean to a fine powder without coming in contact with iron. Clean iron or steel at first imparts a slight flavour to the coffee, but after a time the effect ceases to be noticeable. After grinding, the powder should be used or put into a well-closed glass bottle or tin box.

The decoction is most easily made in the required amount of cold water which is placed on the fire and brought to the boiling point. It should boil for a few seconds, and at the same time throw up a light brown scum which is considered the sure indication that the coffee is good. The coffee powder may now be allowed to settle or the clearing may be hastened by a little cold water, the white of an egg, or isinglass. The strength of the decoction is purely a matter of taste, but the flavour will be the same, provided that the instructions are carefully followed and that every utensil is quite clean. A very small amount of salt should be added to the water before cooking in order to fully bring out the flavour of the coffee. The quantity can only be determined by experiment; if too much is used the result is unpleasant; but as a distinct improvement of flavour is observable when the salt is judiciously used, it merits attention.

#### THE BEST SWEETENING MEDIUM

for coffee is sugar-candy; next to this is coarse brown sugar. White lump sugar is improved by being kept in a closed dish or vessel along with a piece of vanilla. Adding ghee during the process of roasting the beans is not a necessary condition of a well-made coffee.

The January issue of *Morris's Trade Journal* is a great improvement upon its predecessors. Owing to the flimsy paper hitherto used, the journal was almost unreadable. This defect has now been rectified by the use of good paper. The special feature of the journal is its paragraphs of useful information of high value to those engaged in the printing, publishing, paper and fancy goods trades,

## Science.

*By a Master of Arts.*

### THE PROGRESS OF ELECTRO-CHEMISTRY.

One of the most interesting industrial sections at the recent Paris Exhibition was that containing apparatus used in the various electrical methods which, of late years, have been somewhat extensively applied to chemical and metallurgical operations. Efforts are now being made by manufacturers towards obtaining the maximum amount of work from the batteries of minimum weights. The rapid growth of calcium carbide and aluminium industries has brought into existence a number of electric furnaces of various powers of which Dr. Moissain's was an interesting one, in which have been carried out researches on carbides of the metals and the production of various metals obtainable only at very high temperature. The high temperatures required for these purposes are obtained by sending electrical currents through carbon anodes which by offering resistance to the passage of the current produced a high-temperature. At such a temperature, carbon mixes with any substance, for instance, with lime in the cathode in the case of calcium carbide.

Thus carbon becomes an important electrode in the manufacture of carbides. These carbon electrodes are made from mixtures of petroleum, anthracene, graphite and lamp black. The crude mixture is first heated in kilns in the absence of air then compressed into the required shape and passed very slowly into the electric arc. The plates so produced are dense and highly resistant, characters which are essentials for this kind of work.

Another branch of electro-chemistry is the manufacture of soda and chlorine by the electrolysis of brine. Extensive manufactures of these are made by this method in England, Russia and Germany. Special forms of electrolyser have been devised for bleaching wood pulp and fibres, the chlorine being passed in baths of the material to be bleached. One of these is intended for the electrolysis of organic liquids such as syrups of sugar refineries lubricating oils etc, the special feature of the apparatus being that in it, the liquid to be heated maintains a continuous flow at a constant temperature and the flow of liquid and the rate of electrolysis can be regulated and altered respectively.

Another electro-chemical operation is the production of ozone for sterilising drinking water which method is extensively adapted by the municipal bodies in France. Even greater success appears to have been

obtained in electro-metallurgy. Almost all the metal can now be commercially obtained in this way. Aluminium and Nickel are almost solely obtained by this method, so also ferro-chromium and ferro-tungsten, the alloys used in steel making. Gold and tin are obtained by this method from 'wastes' which were formerly thrown away. Other metals thus manufactured are zinc, magnesium and sodium. Considerable advance has also been made in electroplating. Exhibits were on view showing nickel, zinc, gold, silver, brass deposited on other metals in this way. While palladium, silver and vanadium mirrors were also shown.

### X-RAY TUBE FOR PHOTOGRAPHIC SCREEN

The President of the Rontgen Society has placed at the disposal of the Council a gold medal to be awarded to the maker of the best practical tube. The competition is open to makers in any country, and tubes for competition must be sent in addressed to the Rontgen Society 40, Hanover Square, London, W.

### MANGANESE INDUSTRY.

The development of Manganese Mining Industry in recent years is due to the continually increasing demand for "Bessemer and open-hearth steel in the manufacture of which this metal is employed. The European supplies are received from Russia which, in 1899, produced 369,000 tons of ores and, to a large extent replaced Germany and Spain which produced 59,000 and 140,000 tons respectively. Transport difficulties hamper the trade in Russia. Belgium and Sweden produce very small quantities. Brazil and Cuba are likely to come forward. Ores found in the former are said to be free from phosphorus and to yield from the per cent to 50 to 55 metal. In the British colonies vast deposits are formed, but they remain untouched owing to absence of local steel industries. India produced last year 77,000 tons. The cheap labour available here enables it to compete with European countries. In 1899, 600,000 tons were consumed by Europe, and 200,000 tons by the United States the whole being employed for steel-making.

### ALUMINIUM SHEETS AS A SUBSTITUTE FOR PAPER.

In France it has been found possible to roll this metal into sheets, four thousandths of an inch in thickness in which form it weighs less than paper. By the adoption of a suitable machinery the sheets can be made even thinner and can be used, it is supposed, for book and writing paper. The metal will not oxidise, is practically fire and water-proof and is indestructible by worms.

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## NOTICE.

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ONE more attempt to obtain justice for India has failed. Our good friend, Mr. W. S. Caine, moved in the House of Commons an amendment to the King's address in the following terms:—

"And we humbly represent to your Majesty, that although your Majesty's Government have arranged that from April first next charges amounting to £257,500 shall, for the future, in accordance with a unanimous recommendation of the Royal Commission on Indian Expenditure, be transferred from Indian to British expenditure, no provision has been made for any repayment of the arrears of these charges, while other recommendations of the Commission have been ignored altogether; and that, in justice to the people of India all these arrears should be repaid by the British Exchequer to the Indian in the form of a liberal grant in relief of the Indian famine."

The motion was seconded by Mr. Schwann and supported among others by Mr. Herbert Roberts, Mr. Wylie, Sir Robert Mowbray and Sir M. M. Bhowanagree. Though Lord George Hamilton was kind enough to acknowledge the sincerity, moderation and ability which had distinguished the speakers for India still the noble lord made a laboured attempt to prove that England had no arrears to pay to India. After reading the speech of the Secretary of State for India and that of Sir Henry Fowler, his predecessor in office, one is inclined to pity the sophism and quibbling which responsible statesmen are obliged to have recourse to when they are forced to occupy an untenable and often an unwilling position. It is not always that Sir M. M. Bhowanagree commands the applause of his Indian countrymen but he undoubtedly deserves the thanks of the people of India for the strikingly bold speech he made on this occasion. In a pointed and spirited address he declared that in a matter of £. s. d. England had invariably failed to mete out justice to India. This is the old cry and perhaps for a long time to come it will have to be repeated in season and out of season. The amendment was lost,

112 voting for and 204 against it. However, we have reason to congratulate ourselves on the result of this debate. This is perhaps one of the very occasions when the Secretary of State for India displayed no temper. There was also in him a little less of the optimistic mood with which he had always smiled on India. He went so far as to assure the House that if ever it were brought to his notice, or that of the Viceroy that there was any evidence to show that in any particular district the land assessment was too high, or that there was any other cause for the deterioration of the people, either he or the Viceroy would undertake that there should be a thorough investigation. Mark what his Lordship added. He said it was very unpleasant to him ever to have to oppose any motion apparently made in the interests of India. India had suffered terribly during the past two or three years, and the people of India had borne their sufferings with courage, resignation and an absence from crime that commanded the highest admiration. They had shown, too, their loyalty and devotion, and he thought there was no part of the Empire in which the death of Queen Victoria had come home so much to the masses. Therefore, he was glad that at the beginning of a new Parliament there should be such evident signs that there were many members on both sides of the House anxious to serve India and to take an interest in Indian affairs. He was unable on this occasion to assent to the proposition which had been made, not because he did not sympathise with the motives that actuated the honorable gentleman who made it, but because he had obtained on certain conditions a great concession to India from the Imperial Exchequer. Kindly sentiments these and though we regret they did not take a more substantial shape still they augur well for the future.

It is a good sign of the times that considerable interest is now being evinced both by the Government and the people in the problem of developing the material resources of the country. It is a matter for gratification that the Government of India are anxious to render such assistance as it is in their power, to encourage a revival of the indigenous manual industries and to this end are willing to provide funds to the extent of four or five lakhs of rupees. The appointment of Sir Edward Buck, to report on the condition of Indian industries and the possible ways in which they could be developed and the placing of Mr. Chatterton of the Madras School of Arts on special duty, are indications that the authorities, though perhaps late in the day, have recognised the seriousness of the situation. It

seems to us that in this matter there has been, a good deal of waste of words. We are constantly asked to define what is technical education and we are asked to distinguish it from industrial education. The war of words on this point is very much to be deplored. If once we set forth clearly the reason of the present cry for industrial development, a good deal of unnecessary discussion would be spared. Famines have become chronic in the country. The large majority of the population who are dependent solely on agriculture are reduced to a miserable condition in times of severe distress. Something should be done to diversify the occupations of the people. It must be noted that there is a vast field for industrial development and the industries that are at present being worked are in the hands of foreign merchants who carry the profits out of the land. It is ruinous to the material interests of the country that it should be exporting almost all its raw produce and worse still that it should import articles manufactured out of the very stuff we have exported. The result is that while millions of people are starving here for want of labour, the workmen in foreign countries who manufacture our raw produce are earning their wages happily and the foreign merchant pockets unto himself all the profits of the trade. This is a grave economic evil and the sooner we attempt to remove it, the better. In the work of the industrial regeneration of India both the people and the Government must co-operate.

The first thing that we need is, that some of our own men must have a thorough scientific training and must possess an accurate knowledge of the several industries that could be developed in the country. We must, to start with, send a number of young men to foreign countries to undergo training. Industrial scholarships ought to be awarded. The Native States could do a great deal in this matter. We are glad to note in this connection that the Travancore Government has offered two industrial scholarships. This is an example which deserves imitation, and we trust that the enlightened rulers of Baroda, Mysore and other States will select young men from their provinces and send them for training in foreign countries.

Every Presidency must have its museum in which should be collected specimens of the products of all arts and industries. It must contain the best designs and the best samples peculiar to each province to stimulate the merchant and the worker in art. Here we may observe that advantage

may be taken of the annual sessions of the Indian National Congress to have an industrial exhibition. Prizes could be given to the best specimens, the articles being made available for sale so that the manufacturer may be in a position to gauge the prospects of his business.

Protection to our industries is an absolute necessity. The rigid application of the orthodox doctrines of political economy

#### Protection.

and the dread of withdrawal of the Lancashire and Manchester support to the Ministry of the day has done not a little harm to the growth of industries in this country and some have actually been starved out of existence. The Madras Government through the instrumentality of Mr. Alfred Chatterton has made a move in the right direction, and we trust the support that is now being accorded to the aluminium industry will be extended to others. Much of the industrial development of United States, Germany, France, Hungary and Japan is due to the timely aid and protection received at the hands of the State. As Mr. Chatterton points out in the course of an excellent memorandum on the subject "protection of home industries has been the keynote of their policy, and it would be an easy matter to follow in their footsteps if such a remedy were possible in India." In the December number of this *Review* we published an article on "The case for protection in India" from a Native Official. In future issues we propose to devote farther attention to the question.

Convocation addresses and prize distribution speeches have almost lost attraction and nowadays one has to take a report of these utterances with a little shrug of the shoulder. Invariably they abound in commonplace platitudes and jejune appeals to the audience to pursue knowledge for its own sake, to remember the importance of physical education and so on. With the exception of the Madras Convocation address we have been somewhat lucky in the addresses of this year.

The Viceroy's address at Calcutta in his capacity as Chancellor was like other utterances of his, unique and suggestive. With Lord

#### Lord Curzon.

Curzon's suggestion to reform the Senates by reducing the number of Senators and by removing the privilege of voting by proxy, many will sympathise. Any one who gives a few thousand rupees to some educational institution or busies himself with some public movement or otherwise keeps himself in evidence before the official

gods is deemed worthy of a Fellowship and things have come to such a pass that the present practice of nominating Fellows should be amended considerably. Lord Curzon's plea for the constitutional reform of the University is also a matter worthy of consideration, and it is certainly a point for pride that a University should have as its Chancellor, one whose "one ambition is to make this University (Calcutta) worthy of its position of the premier University in India—to set before it a high ideal."

Not less interesting and important was the address

The Honorable  
Mr. Raleigh

of the Vice-chancellor, the  
Honorable Mr. Raleigh.

He is equally anxious to see the University fulfil its true functions, deplors the disadvantage which the long distance between college and college entails. He hopes by personal enquiry to discover whether the colleges receive "the encouragement and guidance which they have a right to expect from the University."

Though he has not been long in India, still Lord

Lord Northcote.

Northcote has given proof that he has realised the real reform that is necessary in our educational system. In

his address, he pleads for an honoured place for commercial studies in the curriculum of the University, and he maintains that the high literary reputation of the University of Bombay will not "be diminished by increased recognition on its part of proficiency in scientific, agricultural and commercial studies."

The address of the Vice-chancellor of the Punjab University was devoted to pointing out the

The Hon.  
Mr. Rattigan.

importance of the study of  
Jurisprudence in India. We

give below the pith of his advice.

I would say to those of you who are or who have just completed the Law School course, do not leave Jurisprudence behind you as you enter on the actual business of life. The muse of Jurisprudence is no crabbed nor idle one. She can offer intellectual satisfaction more specially to those who can find pleasure in abstract ideas and abstract reasoning, but are repelled by the mysticism of some philosophies which move in an ever-recurring cycle from mere assumption to mere scepticism, and which do not after all lift even one corner of the dark veil for ever drawn between humanity and the ultimate problems of life and mind. Far more than a means of intellectual satisfaction, Jurisprudence from its effect upon the science of legislation has immense influence and immense value in practical affairs. By the Courts and by the legislatures, law is ever in the making; and though judges and legislators are mainly guided by actual requirements of the particular case or country and by the sagacity which they derive from

habitual occupation in public business, the success of their efforts in making the law will surely in a great measure depend upon the soundness of their views on social and legal progress and the firmness of their grasp upon that science of legislation which is related to the science of Jurisprudence as I have explained.

Like Mr. Rattigan, Mr. Justice Knox devoted a considerable portion of his

**The Hon. Mr.  
Justice Knox.**

address to the state of legal studies in Allahabad. There seems to have been this year an enormous failure among the candidates for the B. L. degree of that University. Justice Knox with commendable promptitude examined the answer papers of the candidates and was satisfied that the large failure was not due to the eccentricities of the examiners but to the crude and undigested notions of law which candidates exhibited in their answer papers. But Justice Knox did not stop with finding fault with the candidates alone. He was of opinion that the law schools of the province were partly responsible for the deplorable state of affairs. As a result of his address a strenuous attempt is made to improve the state of legal education in that province.

We in Madras have not much to congratulate ourselves on Mr. Shephard's performance. We confess it has been a disappointment to many. Mr. Shephard

**The Hon. Mr.  
Justice Shephard.**

has been in India for over twenty years, has had abundant opportunities both in his capacity as a practising barrister and as Judge to know the darker and brighter aspects of Indian life, while his long connection with the University ought to have enabled him to study Indian educational problems.

Though they have been only a short time in the country, Lord Curzon, Mr. Raleigh, Lord Northcote and other Chancellors and Vice-chancellors have been able to grasp the educational situation and offer suggestions. Mr. Justice Shephard does not seem to have troubled himself much about education, and we search in vain in his address to anything strikingly new or suggestive.

We understand that a proposal has been made in England that the Imperial

**Irrigation in India.** tribute to the memory of the late Queen

Empress should take the form of a "Victoria Fund" for the benefit of "the poorest and weakest nation in the Empire." The idea is that irrigation works should be largely extended in this country and that the fund raised should be utilised for the payment of interest for the first few years on the capital outlay that may be incurred in the execution of such works, it being assumed that the projects will be abundantly self-supporting

when they have had time to develop. Putting aside the suggestion, we are glad to note that the question of extending irrigation generally is receiving attention. The subject has been discussed at length in recent issues of the *British Trade Review* which holds that it is only a question of educating the Government on the necessity of such works being undertaken. It is a costly affair, no doubt; but it will be a great deal more costly in the future to deal with famines, if the work is not taken in hand at once. Another journal, *The Friend*, in an article on "How to prevent Indian Famines" summed up the matter as follows:—

(1) India can be freed from famine only by an adequate supply of water to the land under cultivation; (2) in the great river systems of the peninsula there exists a supply of water abundantly sufficient in most districts, if wisely applied for this purpose; (3) at present in a great part of the country almost the whole of this plentiful supply, of untold value, is allowed to flow uselessly to the sea; (4) given the engineering skill competent to deal with the continent on a large and comprehensive plan there is no reason why the greater part of the area should not be permanently protected from famine; (5) and lastly, the necessary hydraulic works and the outlay on their construction and maintenance would be repaid over and over again in the ever-increasing prosperity of the country.

The fact that a leading organ representing the British trade interests should vote for this kind of investment and advise that "our Indian friends should spare no effort to keep the question well to the front" should make the advocates of railway extension pause and re-examine their position.

We have the assurance of His Excellency Lord Curzon that a liberal budget for irrigation works will be a prominent feature of his reign and the telegram from Calcutta to-day (3 April) that Mr. A. H. C. McCarthy, Under-Secretary to the Bengal Government, has been placed temporarily on special duty in connection with the enquiries concerning protective irrigation works in North Behar, points to the earnestness of the Government of India in the matter. In the words of Dr. Voelcker a great deal can be done in improving the water supply of precarious districts if the Government is prepared to look on the measures taken as those of a "protective" and not purely of a remunerative nature; but even otherwise, as observed by Sir W. Lee-Warner in a recent lecture which he delivered at the London School of Economics, from whichever side the subject is looked at, "the importance of irrigation to the finances, to the food supply and health of the people, to the climate, to the improvement of relations with the frontier tribes, to the awakening of the popular mind, and even to the increase of communication is evident."

## EARTH EATING.

MANY readers, no doubt, remember the sentence in one of Emerson's Essays where he writes, "The first men" (in Guatemala) "ate the earth, and found it deliciously sweet." We recollect an American critic tried to explain this away in a metaphorical sense by saying that these early men conceived the earth as a great cow; then they made the cow to stand for the earth and when they ate of it they said they had eaten earth. It is significant and suggestive, certainly, that in some languages cow and earth come from the same root and in others are really the same word. *Gaia*, the early Greek for cow, was also earth, and it is the same in the Sanskrit. *Gaia*, earth, indeed, corresponds to Sanskrit *gans*, *gô*, cow: *Gothra*, a clan or tribe, is in Rajput a camp or a cow-place. With many races besides the Egyptian and the Hindu, the cow was the emblem of the feminine element—emblem of the nutritive power of the earth. No doubt many of the early men who, in a *naïf* way, gave life and individuality to everything, looked on the earth as a great cow, as a mother, nursing her children, and giving milk to all men—the nourishment that they most desired. Sir William Muir distinctly says this was the rationale of cow-worship among the Hindus, and the same ideas are to be found in Moor's Hindu Pantheon and in Sir William Hunter's Gazetteer of India.

Other peoples have had legends of earth-eating, with more or less of religious reference, which may, however, point backwards to a real and literal earth-eating. Thus, according to the myths of the Cingalese, their Brahmins once fed on earth for the space of 60,000 years. The Hawaiians, as Ellis tells, hold that, after Taaora had formed the world, he created man out of *araca*, red earth, which also was the food of man until bread-fruit was made. Again Mr. J. G. Scott tells us that the first nine holy Brahmins—inhabitants of the

highest Buddhist heavens who settled in Burma, at first lived upon a particular kind of earth, but gradually they became tired of this, and took to eating the seeds of a species of creeper, even as Adam and Eve ate the forbidden fruit. Thus they became gradually less and less spiritual and more and more material until at last they lost all their heavenly attributes and had to live by the sweat of their brow like all their descendants. The inference here clearly is that edible earth was more favourable to spirituality than vegetable diet! Many instances we might cite to attest the fact that a ceremonial earth-eating may go along with an ordinary earth-meal, as in these cases. We are told that the Aztec devotee picked up a pinch of clay in the temple of Jercatlipoca, and ate it with the greatest reverence. The Mexicans, when they swore by the sun, and our sovereign mother, the earth, took up and ate a piece of earth. But, with the Mexicans, clay-eating does not seem to have been merely ceremonial: clay was an edible in common use; and edible earth was sold openly in the markets. The eating of clay was forbidden to Mexican women during pregnancy (which suggests whether, from religious reasons, it may not in very early times have been *tabu* to women altogether, as certain sacrifices and portions of sacrifices still are, among savage tribes, *tabu* to women). We are told that the Mexican nobles ate earth from the feet of their idols.

It is not needful to go into any ingenuities to explain away Emerson's reference which, we believe, admits of a wholly direct and literal interpretation in the light of facts faithfully recorded. Not only are there in certain latitudes bread-fruit trees, but in some peculiar formations of strata or mixture of soils there are undoubtedly lines and veins of edible clay on which men can subsist for days, and have subsisted if they do not now subsist. Nature is bounteous: if she does not provide one thing, she does another, and is ever rich in compensations. In the Arctic regions of the earth, she abundantly provides creatures rich in oil—the seal, the whale



&c., from which the dwellers there may at once obtain food and heat; in the tropical regions she produces abundance of cooling fruits, while in others, when labour is ungrateful to man, even the soil is food. Earth, indeed, has been eaten by many peoples. Here are some further striking instances.

The Bikanees of India eat a kind of unctuous clay, and Cutchee ladies are said to eat it, as in some other portions of the globe—Carinthia, for example—the ladies do arsenical earth, because they fancy it improves their complexions. In Tonquin they make a kind of waffle or fritter of diluted clay, sugar, and some other ingredients. The Chinese in many parts mix gypsum with pulse, and thus form a jelly, which they greatly relish. We find Mr. Winwood Reade writing of the Mandingos of West Africa:—"On the thatches of more than one house I saw pieces of yellow earth, which is used for food, and as a medicine to produce purging. I could easily understand its being eatable, for it possesses a piquant and agreeable odour. The Tunguses of Siberia eat a clay called "rock marrow" which they mix with marrow. The Jukabirs of North-Eastern Siberia have an earth of sweetish and rather astringent taste to which they ascribe a variety of sanatory properties. Malte-Brun tells us that the earth which is eaten by the Ottomacs of the Rio Orinoco is fat and unctuous, and Waitz, quoting Heusinger, says that the Ottomacs of the Rio Orinoco eat large quantities of a fatty clay. Clay was eaten by the Brazilians generally. The Romans had a dish called *alica* or *frumenta* made of the grain *zea* mixed, as Pliny writes, with chalk from the valley of Puteoli near Naples. The Minseas of Florida, had in their language the word 'Jipatera'—a disease from eating earth. Venegas asserts that the Indians of California mix red earth into their acorn bread "to make the bread sweet and make it go further." Cabeza de Vaca says that the Indians of Florida ate clay, and that they offered him "many beans which they ate mixed with earth." In Zanzibar too, they

have a disease induced by earth-eating: it is called *safura*. The clay is said to have a pleasant odour to the eaters; rich men who have plenty to eat are often victims to *safura*. Dr. Rutherford tells that earth-eating prevails pretty well all along the upper part of the West Coast of Africa. 'I met with it first,' he says, at Babani, where there occurs a deposit of yellowish clay, containing about fifty per cent. of iron, a considerable quantity of mica, and some quartz particles; but there is evidently a large quantity of organic matter in it. The clay is made into balls about five inches in diameter and is baked over a slow fire. When quite dry and ready for use, a small portion is broken off, placed in the hollow of a smooth leaf, and reduced to powder between the finger and thumb. The leaf is then gently shaken to make the harder and more gritty particles fall aside. These are carefully removed and the residue is transferred to the mouth, masticated and swallowed.

The people of the Mackenzie River, North America, also eat an earth, in times of scarcity especially, which is without grittiness, and has a little of the flavour of the hazel nut. Certain people of Nicaragua eat a clay called by them *jabozi*. When moist, it has a sort of soapiness, and gives a foamy result when it mixes with saliva. It has a slightly fatty taste. When well selected, there is no sand in the paste, the whole substance dissolving on the tongue. Pim says: "One of the miners told me he was about twelve years old when he began the habit of eating this clay. Commencing little by little, he ultimately ate several pounds a day, and he lived several successive days upon nothing but earth, always drinking a good quantity of water, and feeling little or no appetite for any other food. At most times he used to eat the earth as it came from the mine, but sometimes he would vary the flavour by an admixture of common brown sugar or toasting the clay over the fire." On the Orinoco River, as said already, the custom is common, the woman being often seen swallowing big lumps of yellowish white clay. "The Aymaras

of Bolivia make a similar clay an ingredient in soup which they call *Chupe*." "In the city of La Paz," says a traveller, "I found that clay prepared for the purpose was regularly sold in the market under the name of *ppasa*. . . . A complete analysis of the clay shows that it contains no element of nourishment—the organic matter only amounting to 1.05. I therefore imagine that the custom of eating it is merely for the purpose of keeping the stomach more distended and retaining the food longer under the action of the gastric juice." But this could scarcely apply to the clay which the miners of Nicaragua subsisted on solely for days.

Gifts of nature have, by early men, almost always been attributed to the good will and bounteous blessing of a God or of the Gods; so that the ceremony of observance of earth-eating from the feet of idols &c. may be but the natural result of the literal earth-eating—eating the one following on the eating of the other, wherever it has been, at an early stage, indulged; and it remains, as it were, a survival of an earlier habit, sanctified by association, with gods or idols. That, indeed, is how man's mind works in earlier stages; whatever is prized and found pleasant and beneficial is associated with the God and is finally not viewed as any way apart from Him—in many cases becoming sacramental.

ALEX. HAY JAPP.

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### PROGRESS OF EDUCATION IN ENGLAND.

EVERY one knows that the English constitution is the result of organic growth, expressing, as it does, the characteristics of the English people, their prejudices, their traditions—in fact, everything which marks them off from other people. But the constitution does not stand alone in this respect. Other English institutions reflect the same features, and in nothing is this English peculiarity better illustrated, perhaps, than in the system—or rather, want of system—of education. Other countries have their written, clear-cut constitutions, and they have also their well-defined educational systems struck off at one time by some great statesman. In England, the educational system has grown up bit by bit, a patchwork sort of affair, for which no one in particular is responsible. In spite of recent efforts to round it off and give some kind of unity to the whole, it still remains, compared for instance with the French, German, and Indian systems, in a sufficiently chaotic condition.

In order to better appreciate the extent of the progress of education in England, during the reign of late Queen-Empress, it is necessary to take a rapid glance at the condition of education at her accession. Higher education had existed from time immemorial. At the accession of Victoria in 1837, the older Universities were on the point of losing their monopoly of providing university education. London University, an unsectarian University "the creation of a God-excluding seminary," had just been founded (1836), and Durham University was called into existence the year of the Queen's accession. The older Universities still closed their doors to Dissenters, and in spite of the wave of reform which had set in after the Napoleonic era and which had reached even the Universities, Oxford and Cambridge were still essentially ecclesiastical and mediæval in constitution and in the nature of their studies. At the particular time of which we treat, the Tractarian

movement had seized upon the Universities and had produced a storm of religious controversy which absorbed the energies of the best intellects. The so-called public schools and the grammar schools, which made a speciality of the ancient languages of Greece and Rome, were the preserves of the wealthy and, like the Universities, the homes of antiquated scholarship, and wholly unreformed. Below them came a number of private schools, managed on strictly commercial principles by persons of little culture, of no training as teachers, the failures in many cases of other professions. At one of these schools, Charles Dickens learnt nothing but the elements of common knowledge. In spite of his genius, he secretly lamented and could not disguise the defects of his early training. His "Squeers," brutal and ignorant, represents, with some exaggeration, the typical, private schoolmaster of the thirties. Next in order, came the schools for the poor. The eighteenth century, had seen the rise of the "Charity" Schools—significant title—schools in which the children of the poor were mostly fed on the Church Catechism with the object of their paying due respect to their betters; taught too often by incapable and degraded persons, and clothed in some distinctive dress "to remind them of their rank." Besides these schools, Sunday Schools were in existence at the accession of the Queen, and these taught the elements of reading and writing to the poor. But more important than the Charity and Sunday Schools, were the schools of two rival societies, the British and Foreign School Society, founded in 1814, and the National Society, founded in 1817. The latter was the organ of the Church of England; the former represented the Dissenters. They had been founded by two educational rivals, Bell and Lancaster, whose methods differed but little—for they both adopted the plan of teaching children by children—but whose religious acrimony has lived on and has permanently separated those whose common object is the education of the poor. These, then, were the agencies for the educa-

tion of the lower classes when Victoria ascended the throne,—the Charity and Sunday Schools and the schools of the British and Foreign Society and the National Society. All were free of State control, though the two latter bodies were in annual receipt of the sum of £20,000, granted by Parliament in support of their efforts. The grant of this paltry sum represented the utmost that the State then did for elementary education. How necessary it was that the State itself should come forward and supplement voluntary effort, or rather itself take the initiative, may be gathered from the following facts. Of the two millions of children between the ages of seven and fourteen in England and Wales, at the accession of Victoria, one-half was absolutely uneducated. Of those educated, more than half were educated in Sunday Schools, and their education was of the flimsiest. England was, so far as elementary education was concerned, one of the most backward countries in Europe. In England the proportion of educated children to the whole population was 1 in 14; in Prussia 1 in 6; in Switzerland 1 in 7; in Holland 1 in 9; while in New York, one of the emancipated English colonies, it was 1 in 3. This state of things was not unnoticed by either the leading statesmen of the day, the people themselves, or by the young Queen herself. Many years before, Malthus in his *Essay on Population* had remarked. . . . "in their education, (that of the poor) and in the circulation of those important political truths that most nearly concern them, which are perhaps the only means in our power of really raising their condition, and of making them happier men and more peaceable subjects, we have been miserably deficient. It is surely a great national disgrace, that the education of the lower classes. . . should be left merely to a few Sunday Schools, supported by a subscription from individuals." Later on, and in the years immediately succeeding the accession of the Queen, Brougham had honourably associated himself with the cause of popular education. It was during one of the discussions which accompanied Brougham's earlier

efforts to enlist the action of the State, that Can-  
ning uttered the memorable words that he was  
"satisfied that the foundation of good order in  
society was good morals, and that the foundation  
of good morals was education." But the desire to  
raise the standard of comfort among the people by  
the spread of education was not confined to great  
writers and statesmen. The leaders of the people,  
caught up by the impetus given by the Reform  
Bill of 1832, advocated the principle of self-help  
as the foundation for a national system of educa-  
tion. Lovett, the Chartist, desired "to create  
a moral, reflecting, energetic public opinion,"  
by means of educational agencies, "so as even-  
tually to lead to a gradual improvement in the  
condition of the working-classes," and was con-  
vinced that "the good that is to be must be  
begun by ourselves." The young Queen was no  
less solicitous of the spread of popular education.  
It is the popular idea that the sovereign in England  
answers to Thier's ideal of "a king who reigns  
but does not govern." Perhaps it will never be  
known to what extent the late Queen-Empress  
modified this saying; but the personal part she  
played in the question of education, soon after  
her accession, at least shows that she asserted her-  
self from the very beginning of her reign. In 1839,  
addressing Lord Lansdowne, President of the  
Council, through Lord John Russell, she caused  
the latter to write:—

"My Lord,—I have received Her Majesty's command  
to make a communication to your Lordship upon a sub-  
ject of the greatest importance. Her Majesty has  
observed, with deep concern, the want of instruction  
which is still observable among the poorer classes of her  
subjects. All the inquiries which have been made show a  
deficiency in the general education of the people, which  
is not in accordance with the character of a civilised and  
Christian nation."

If this is not sufficient proof of the personal  
part taken by the Queen in the matter of education,  
we have it in the well-merited reproof which the  
young sovereign administered in 1839, to the Lords,  
who, led by the Archbishop of Canterbury, ende-  
avored to prevent any portion of the Parliament-

any grant for education from reaching the  
dissenting schools of the British and Foreign  
Society through the hands of members of the Privy  
Council. In the words of Harriet Martineau (*His-  
tory of the Peace*)—"they received their rebuke  
from the clear voice of their young Queen who  
saw, under the guidance of her Ministers, the full  
enormity of the claim of the Church to engross the  
education of the nation."

Thus the ground was prepared for the seed  
which was destined to develop into a complete  
organised system of elementary education. The  
year 1839 saw the sowing of the seed in the shape  
of the creation of the Education Department.  
Parliament was induced to increase its grant to  
£30,000; its distribution was to be regulated by a  
Committee of the Privy Council for Education, and  
not by the two existing Education Societies—hence  
the tears of the Lords, particularly the Bishops,  
referred to immediately above. Above all, State  
inspection was to be a condition of receiving part  
of the grant. That it was, however, still the day  
of small things and of a totally inadequate concep-  
tion of the needs of the nation, it is sufficient to  
mention that while Parliament allotted the  
magnificent sum of £30,000 to Education, it  
voted the same year no less a sum than £70,000  
for the erection of royal stables! The scheme for  
a training college was negatived by Parliament, and  
the predominating influence of the Church was  
maintained by the condition that Inspectors of  
Church Schools must be clergymen approved of by  
the Archbishop of Canterbury. Still, the Com-  
mittee of Council made headway. Guided by the  
inspiration of Sir James Kay-Shuttleworth whose  
efforts on behalf of national education were  
"heroic," it granted certificates, after examination,  
to masters and mistresses; the Parliamentary grant  
increased by many times; the training institutions,  
which had sprung up as the result of voluntary  
effort, were warmly encouraged; and lastly, the  
pupil-teacher system was introduced in 1846. In  
1856, the Vice-President of the Committee of

Council was made directly responsible to the House of Commons, thus betokening the increased interest of Parliament in Education and its resolve to control its development. The name of Robert Lowe is associated with the next great measure in the progress of popular education. As Vice-President, he carried in 1863 his almost revolutionary proposals for the distribution of the grant which was now approaching the sum of £150,000. His code was based on the principle of "payment by results," a principle which he justified by the dilemma—"if the system is not efficient it will be economical, and if it is not economical it will certainly be efficient." The principle has since been discarded (1890) for it converted examinations into a fetish, and took the life-blood out of teaching. But perhaps its strongest detractors would be willing to admit that it was not an unmitigated nuisance; that it weeded out the inefficient schools at a time when many existed.

In 1870, the Gladstone Ministry was in power, and its term of office was characterised by a series of great measures which had for their object the upraising of the people. Education came in for its share of reform and development. The older Universities were liberalised by the final and total abolition of religious tests; endowed schools were reformed; and an effort was made to give every child in the kingdom the opportunity to read and write. With this effort is associated the great name of W. E. Forster. He made attendance at school during the hour of religious teaching optional on the part of the parent, thereby putting a stop to the forcing of sectarian creeds down the throats of children, willy nilly. He provided by the establishment of School Boards for the education of children in districts where the accommodation given by existing schools was insufficient, and he prepared the way for universal compulsory education, (1880) and thereby for gratuitous education, (1891) by empowering Local School Boards to make education compulsory within their districts and to remit fees in poor districts.

Mr. Forster's Acts ostensibly aimed at giving a sound elementary education to the poorest in the land. That foreseeing statesman saw what is only in this year of grace, 1901, just being borne in on many people, that the best safeguard for England's free and democratic institutions, and the best basis for industrial prosperity and national greatness, is the intelligence of the people, developed, through the agency of education. The success which has attended the Acts of 1870 and the immediate subsequent years has been almost unqualified. Of course, sectarian animosity has been aroused in view of the severe competition to which denominational or voluntary schools have been subjected by the better equipped Board Schools supported by local rates.

Since the seventies there have been many improvements in the national system, some of which have been already indicated and do not need to be described in order of time. The Pupil-Teacher System has been modified for the better. Boys and girls of the tender age of thirteen are no longer apprenticed, made to teach large classes for five hours daily, to receive one or two hours' instruction from the Headmaster, and to spend their evenings in preparation. They now teach for half the day and are much more carefully instructed, especially those who attend at Pupil-Teacher centres. The curricula of the schools have been improved. Payment by results has given place to "surprise" visits and to the general intelligence, conduct, and methods of teaching as the tests of merit in the awarding of the government grant. Side by side with the improvement in the schools, the position of the teachers has vastly improved. A Superannuation Act in their favour was passed in 1898, and their organ the National Union of Elementary Teachers, which numbers nearly fifty thousand members, watches over their material interests. No fewer than three of their number have seats in Parliament where they make it their special business to safeguard the interests of both scholars and teachers. Elementary teachers, too, are represented

on the Consultative Committee appointed in 1900 to assist the Board of Education—a Board which has superseded the old Education Department and to which reference will be made further on. Two other developments of Primary Education can only be mentioned. They are the establishment of Evening Continuation Schools and Higher Grade Schools. These have just received a check arising out of the question as to how far money raised by local rates may be expended on so-called higher education. The Evening Continuation Schools constitute an attempt to continue the education of children during the important period which follows the termination of school life at the age of fourteen.

So far, then, as Elementary Education is concerned England has a State System. It has doubtless its defects, among which may be mentioned the narrow training of the teachers and the unsatisfactory way in which the law making attendance compulsory is administered. But, take it all in all, England may be proud of a system, the origin and development of which are synchronous with the reign of the late sovereign. It now remains to deal as concisely as possible with the progress of Higher Education during the same period.

Private schools there are still in abundance, and these, unlike similar institutions on the Continent, remain uninspected and uncontrolled. It is possible that the Board of Education may do something towards improving this class of schools; for the Consultative Committee, to which reference has been made, is empowered to draw up a register of competent teachers and to inspect such schools as may desire to be inspected. No doubt the incompetent schools will shirk this test, in which case it is to be hoped that the public will act accordingly. But, judging by the past, it is not impossible that the British Middle Classes will, for some time to come allow themselves to be the ready victims of men who pose as teachers without a single qualification. As regards the old endowed and grammar schools, the Charity Commissions appointed in 1853 have done much to divert endowments into

proper channels, to remove the utterly incompetent, and to modernise and to stimulate the curricula and working of these schools. The Public Schools Enquiry Commission of 1861, the Endowed Schools Commission of 1864, the Public Schools Act of 1868 and the Endowed Schools Act of 1869 constitute the first attempts at State interference in Secondary Education. It was a beginning, indeed, but only such, and the report of one of the Commissions (the Taunton) is as true now as it was when written years ago. "Not a single payment from the Central Government to the support of a secondary school, not a single certificate of capacity for teaching given by a public authority. In any of these senses there is no public school and no public education for the middle and upper classes. The State might give test, stimulus, advice, dignity; it withholds them all." But a change is working for the better, and to this change expression was given by the creation of the Board of Education Act last year—an Act which owes its origin to the Royal Commission of 1894-5, presided over by Mr. Bryce. By that Act a Minister of Education has been created who is charged with the general supervision of education, secondary, middle and primary, while the charge of the latter comes, as before, under a minister who has a place in the House of Commons. As has been said, a large and representative Consultative Committee has been appointed to secure a Register of Teachers and the inspection of such schools as will submit to the test. It is too soon to speak of what the Board of Education may achieve in the way of giving unity and cohesion to the whole system. But here at least we have the germ of such unity and the means of rescuing secondary schools from the chaos into which they are plunged. The Transvaal war, and the danger to England's commercial supremacy seem to have aroused public opinion as to the question of the fitness of existing secondary and middle class education as a preparation for the struggle for national existence. Mediæval traditions, mediæval subjects and methods still linger on, and the con-

cessions which have been made in the direction of the development of the modern side in the shape of modern languages, laboratories, and museums have been made in a grudging spirit. General culture still suffers at the hands of those who imagine that no education is worthy of the name which does not confine itself to either classics or mathematics. Before leaving this subject of Secondary Education, the action of the Universities of Oxford and Cambridge in establishing Local Examinations for secondary schools for boys and girls, ought not to be omitted. These Local Examinations have had their share in modernising the curricula and in helping to draw a line between efficient and inefficient secondary schools.

One step more remains to be taken, the step which takes us up into the region of tertiary or University Education. We have seen how at the commencement of the reign the Universities of England and Wales could be counted on the fingers of one hand. Now, local Colleges and Universities abound. Some are affiliated to the older Universities and all require residence as a condition of membership. Even the London University which was founded in 1837, the year of the Queen's accession, and which soon became a mere machine for examining, has (1900) been partially converted into a Teaching University, although "external" students are still to be examined. Not only has there been during the reign a multiplication of Universities, but there has been reform from within, tending in the direction of making the older Universities national institutions. The decade, 1850—1860, saw the principle of State interference extended even to the Universities. As the result of University Commission, religious tests for the B.A. degree at Oxford and Cambridge were removed though it was not till 1871 that these tests were entirely abolished. The institution of University professors was restored, fellowships opened to merit, and studies liberalised. Subsequent innovations have carried on reform in the same direction and the Universities are becoming more modernised in every

way. They have approximated more and more to national homes of learning. Their doors have been again opened to non-collegiate students—men of modest means; university education has been carried to the remotest corners of England by the system of University Extension Lectures, of which the very poorest have availed themselves. The lecture rooms have been opened to women students who, in addition, have been allowed to take their place in the examination halls. Oxford and Cambridge alone, with characteristic exclusiveness, still refuse their degrees to women whose merits they appraise. Women's colleges, though forming no part of the Universities, are found at both Oxford and Cambridge, such as St Margaret's and Somerville at the former, and Newnham and Girton at the latter. Through these institutions women have passed whose achievements have equalled, and on some occasions eclipsed, those of the men. As feeders to these women's colleges there are excellent secondary schools for girls all over the country where a sound education is imparted.

Another sign of educational activity is the series of Conferences for Headmasters, Secondary Assistant Masters and Elementary teachers, which are held annually and receive their due attention in the daily newspapers. Finally, it remains to say a few words on the spread of technical education during the reign of Queen Victoria. Though much remains to be done in this direction, what has been done promises well for the future. Education in England is still far too bookish, and too little attention is paid to hand and eye training. But a momentous change is being wrought, and wrought too in all grades of educational institutions, from the Primary School to the University. In the primary schools increased attention is being paid to manual instruction, as distinguished from the more specialised technical instruction which is given in secondary schools; while in the Universities, technological institutions have sprung up within the last few years. In this good work State help, pri-

vate enterprise, City Companies, Chambers of Commerce and local authorities have all had a share. It was not, however, until some twenty years back that the English people awoke to the fact that facilities must be afforded for manual and technical instruction if England was to hold her own as a great industrial and commercial power. It was in 1881 that a Royal Commission was appointed to enquire into the facilities afforded in foreign countries for the technical instruction of persons engaged in productive industry. The Act of 1888 and the allotment of the money under the Customs and Excise Act of 1890 have done much to establish and develop technical education throughout the country. The history of the great industrial revolution which began in the middle of the eighteenth century shows conclusively that inventive genius is not absent from the British workman. It is to be hoped that the recent remarkable development in technical education will enable the intelligent workman to obtain that knowledge which will enable him to compete successfully with his German rivals.

In every direction, then, education has made most remarkable strides in England during the reign of Queen Victoria, some branches having been entirely begun and developed during that period. There has been progress in every aspect of the national life, but it may be safely asserted that in no direction has development been so marked as in education. The future is bright with promise. The Education Act of 1900 points to an immediate future when England will have a really national system, a system embracing and co-ordinating the congeries of systems which still exist, in which incompetence on the part of teachers will be reduced to a minimum, in which improved curricula will have the effect of giving an all-round education, enabling men to become happier, better producers, and more intelligent citizens.

THOMAS DENHAM.

## LORD AMPHILL'S NEW DÉPARTURE. ✓

LORD Amphill has made a new departure—a departure which is likely to be prolific of excellent results if persevered in and dealt with systematically. We refer to his method of gleanings accurate knowledge of the conditions, the grievances and the opinions of the great agricultural community which, in India, mainly forms the vast bulk of the population—the community that furnishes the wherewithal which maintains the edifice of British rule in this country. Knowledge, however fragmentary and imperfect, obtained first-hand, is superior to knowledge which is received after it has dribbled through the conduits of official bias and official phlegm. If His Excellency the Governor does not weary in his well-doing, he will have gained, during his quinquennial term of office, more true information of the existing conditions of Indian rural life and have gauged more correctly the mind of the Indian ryot than any two of his predecessors combined. It is not difficult to imagine how much genuine hard work, personal discomfort and tiresome searching after details, Lord Amphill's method implies; what a weariness to the flesh and the understanding it must be to interview, more or less, ignorant agriculturists and artisans, with interminable stories of hardship brought about by indifference, red-tape, active spoliation and so-called oppression—vitiated as these must necessarily, sometimes, be, by the little knowledge which is unequal to the task of spanning the immense orbit of prevailing administrative measures. Notwithstanding this we cherish the hope that now that His Excellency has started on the royal road of enquiry and investigation, he will pursue it without pause to the end of his career in this Presidency.

Frequently recurring famines, due for the most part to unfavourable seasons, have reduced the Indian ryots to a state of poverty, so accentuated and hopeless that it has become impossible to ignore any longer the causes which have tended to



this result—a result far from creditable to the power which guides the destinies of this country and a result which has awakened the sympathy and tapped the charitable resources of foreign peoples and nations. Famines consequent on adverse meteorological conditions, if frequent and prolonged, veritably lead up to famines pecuniary and, as the last unprecedented famine conclusively demonstrated, it is not so much a matter of the want of food as it is the lack of the wherewithal to buy it that it is the seat of the mischief. Thanks to railways and steam-communication, food can be procured and brought in plenty to the scene of desolation; but when it is brought, the Indian ryot is unable to purchase and is obliged to receive alms from the Government. Poverty-stricken and half-starved, the ryot has no staying power, and it will take many unbroken years of abundant rain and golden harvests before he will be in a position to disregard Government aid and face with smiling confidence even one brief season of drought and distress! The Indian ryot is a fatalist and the remarkable law-abiding endurance which characterises him under the severest trials, physical and mental, is a powerful auxiliary as well as a grievous temptation to Government. The latter especially inasmuch as it tends to the continuance of the policy of *laissez faire*, if not that of complete indifference. Not that Government has not done much to mitigate the severities of want. By no means. It has done a great deal; and, perhaps, thinks it has done all that it could! But prevention is better than mitigation; and viewing all the circumstances of the case impartially, one is inclined to the belief that the fatalistic propensities of the subject-population have to some extent jaundiced the view of their rulers. It is not an uncommon experience to meet with administrators, and other well-meaning critics, who ascribe all the evils that the Indian ryot suffers from to the visitations of Providence in the shape of drought and plague. Such critics hold that India has always suffered from famine, and that there will be famines

to the end of the chapter, and that it is the normal condition of the Indian ryot to be on the borderland of starvation. Bad seasons, doubtless, account for much, but there is undoubtedly a great deal that is lacking in the administration of affairs which, if attended to and remedied, would minimise the evil results of bad seasons and would place the ryot in a position to withstand bravely and successfully a number of consecutive years of want. There are not wanting adverse critics of the Indian government who daily advance panaceas without number, for the promotion of India's prosperity. These should be thoroughly sifted and carefully considered. On the other hand, the masses of India, more especially the peasantry, have numerous grievances and it is needless to say that they should be enquired into and wherever possible redressed. Red-tape forms a barrier between the rulers and the ruled which is as impassable as it is efficient, and the administrator who endeavours to get beneath the surface of things, to spy out the nakedness of the land for himself is doing a great public service. Lord Amherst's method of holding informal durbars which ryots may attend and address him is an admirable way of getting at the core of things. Red-tape is fatal to truth and promptness and is the quagmire in which are swamped the most righteous intentions of the governing power. We have said the Indian ryot is a fatalist, but even as water wears away the stone the spirit of the times is disintegrating and fashioning anew his thoughts and ambitions, and in the process he is beginning to recognise with Emerson that "fate is impenetrated causes." The true connexions of things may be wanting to him, for, he is yet groping in the darkness of ignorance for indication of the truth, and instead of allowing him to ascertain the true causes of his hopelessness for himself, it should be the aim of Indian administrators to do so by the light of their superior knowledge, by the animadversions of their critics and by the study of the many still unsolved problems of Indian administration in consultation with the people. Representa-

tive Government is denied but a fair substitute would be furnished if the easy accessibility given by Lord Amphill to the working representatives of the people is extended to them by all Indian administrators. Collectors, and Revenue Officers generally, would take their cue from the Governor and things will improve all round. "Every jet of chaos which threatens to exterminate us is convertible by intellect into wholesome force," says an eminent writer, but no person with the very poorest opinion of the Indian beurocrat will, we apprehend, advance the opinion that the latter is wanting in intellectual power. Something then is lacking; merely sympathy! Not the sympathy of eleemosynary assistance, not the sympathy of pitying condescension, not the sympathy of good intention, but that of personal exertion, of active enquiry, of, in other language, deeds not words. Our great men in India, such as they are, have immense opportunities afforded them of getting into touch with the people and yet how few do so! "There are men" says the author quoted already, "who by their sympathetic attractions carry nations with them and lead the activity of the human race," and although such men are rare, it lies within the power of most men placed in positions of trust and responsibility to know more of the people they are empowered to rule than they do. Governors come and Governors go, speeches are made, addresses delivered, and the pomp and circumstance of His Majesty's representative sink into the hearts of the people. And what then? Are they any the better for the triumphal arches, the long-winded speechifying or the waste of gunpowder? Not a whit. For, generally, the addresses made to peripatetic satraps are not worth the value of the paper they are written in inasmuch as they are emasculated by the rigid censorship of the District Officer, derided by no means reflect the truth. Moreover, they are mostly drawn up by men unacquainted with the remote or secret springs of action which discovered the cause of administrative measures; and the instructions often than not they ascribe motives and

reasons of things done by the Executive which when examined do not bear the light of truth. In nine cases out of ten, addresses made in the mofussil are vitiated by the imperfect knowledge of facts, sectarian bias, local prejudice or callous selfishness. The local whisper in the making of an address of a petty mofussil station is to the local orator the murmur of a world, but the person to whom the address is presented, as often as not, focuses the wants, wishes and grievances it contains from the large end of the telescope, and the result is *nil*. On the other hand, the visiting great man has to base his replies on information supplied by his subordinates in the district, and even if such information is wrong, the Governor has committed himself to a reply and cannot easily beat a retreat, when he subsequently discovered that an erroneous statement was made. Gubernatorial replies are invariably vague, unpromising and unsatisfactory, though they are often complimentary. Fair words, however, better no hardships, and the giving and receiving of meaningless addresses on public policy by every little Municipality and by petty deputations of mediocre men is much to be deprecated. It is a playing at confidences, a method of communication neither esoteric nor exoteric. Both addressers and addressee wait in a vain shadow and disquiet themselves in vain, and to the general public who witnesses the perennial pantomime, it is extremely ridiculous and just a wee bit tiresome. Gubernatorial tours should not degenerate into pageants or be made the occasion of oratorical display. It should be made the opportunity on the part of the visitor of studying the aspect of local conditions from an independent standpoint of getting at the root of difficulties, of redressing wrongs and of collecting as much information as possible. The duties of Governors and Councillors are onerous and heavy, and we would not willingly burthen them with more, but there appears to be no reason why gubernatorial tours should be so hastily made as they are; and we cannot see how the stay of a Governor in a station for a number of days instead

of hours would interfere either with his comfort or his work. Then of the six months spent in the bracing air of the Nilgiri Hills some may well be utilised in touring slowly through the country, and getting an insight into administrative and economic matters. The departure made by Lord Amthill is open to abuse, no doubt, which must be guarded against, but we have no hesitation in saying that His Excellency has gauged the situation and is endeavouring to deal with it in a sensible manner. Disregarding for a moment the variety of knowledge and truth, which tours conducted on Lord Amthill's method are likely to yield, the moral effect of the system would indubitably bring about an immense amount of improvement in the morale of the subordinate executive. Even superior District Officers would take their cue from the Governor and reflect more deeply, act more promptly and redress evils more frequently than they are inclined to trouble themselves with now. A peripatetic Governor of easy accessibility is likely to become acquainted with astonishing revelations. Had Sir Arthur Havelock, for instance, travelled in Tinnevely just previous to the Shanar Maravar riots and held informal durbars at which all sorts and conditions of men were admitted, it is scarcely to be doubted but that he could have got an inkling of the spirit of animosity characterising those two rival communities. Lord Amthill's easy accessibility to the meanest villager decidedly commends itself to us. It is a return to the traditional methods of sapient Eastern potentates which is likely to become very popular, and which will encourage the villager to consider himself a by no means unimportant unit in the government of the country. When these informal durbars bear subsequent fruit in the shape of actual results, the confidence of the people in the good intentions of its government now sadly marred and the spoliation of rapacious subordinates will be enhanced; and this in turn will create a spirit of independence to resist unlawful demands and oppressions of all kinds. To him who wills, a great many things

are possible and it is to be hoped that the inertia so fatal to continued effort in this country will spare Lord Amthill. It is the system that counts, and not the single word or unsupported action. Efforts intelligently adjusted to requirements will result in achievement not attainable by the hap-hazard administrator who relies on the shibboleths of tradition, or views men and affairs through the spectacles of his pet advisers. His Excellency has broken through the trammels of recognised procedure in another direction also, to wit, in inviting District Officers to Madras for consultative purposes. These civilities should be extended to comparatively subordinate officers like Superintendents of Police and Deputy Collectors, and to non-official and European native gentlemen. The matter of accommodation is a mere detail and should prove no obstacle in the way. One word of caution to His Excellency may be pardoned and that is, he should hear everything and say comparatively nothing. He should be receptive, not communicative, for a Governor's words are apt to be valued at a higher rate than an ordinary official's. It is not safe to predict unless one knows, but there is no harm in one advancing the opinion that if Lord Amthill carries out in full the programme which we take the liberty of assuming he has sketched out, he will win for himself a distinguished, if not a foremost, position in the rôle of the many distinguished and able men who have held the reins of power in this Presidency.

A. P. SMITH.

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### PROGRESS OF MEDICINE IN THE VICTORIAN ERA.

THE progress of medicine during the Victorian era has been astonishingly rapid. The "fairly tales of science" have nothing more marvellous to unfold than the story of the advance made in the healing art during the century that is now closed. To describe in all their details the various steps by which medical science has advanced to its present condition, in the space of a short article, is almost impossible. Nor are the pages of a lay magazine the proper place for such a detailed and scientific analysis of medical progress. I can only briefly sketch here some of the prominent landmarks in the progress of medicine during the Victorian era. Before 1837 eminent British physicians, like Bright and Addison, had done excellent work by bedside observations. But the progress of medicine received a fresh impetus during Queen Victoria's reign by the application of scientific methods to medical research and the perfection of various instruments of precision. Although the stethoscope, which has now become inseparably associated with the physician, was discovered in the year 1819 by Laennec, yet at the time of Queen Victoria's accession physicians were still sceptical about its usefulness in physical diagnosis. Dr. Davies [who first used a stethoscope in England was humourously known among his hospital out-patients as "the man with the horn."

A better appreciation and more extensive use of this most valuable instrument are events of the Victorian era; and to the use of the stethoscope must be attributed in a very large measure our present knowledge of diseases of the heart and the lungs. Another instrument which has helped considerably in throwing light on some of the more obscure cerebral diseases is the ophthalmoscope. We owe this to the genius of Professor Helmholtz, who discovered it in 1851. Although Helmholtz discovered the instrument, it was the distinguished German

surgeon Von Graefe who introduced it into the practical work of physicians and surgeons, and Professor Reute was one of the first to improve Helmholtz's instrument and to make it more suitable for the purposes of the ordinary practitioner. At the present time the ophthalmoscope is one of the most widely used instruments in medicine, and the improvements and modifications of the instrument are so many that almost every well-known oculist has an ophthalmoscope called after his name. Closely following on the discovery of the ophthalmoscope came that of the laryngoscope. Curiously enough we owe this indispensable apparatus to a Spanish singing master. For it was Manuel Garcia who in 1855 first demonstrated the possibility of getting a view of the interior of the larynx with the aid of the throat mirror. The invention of Manuel Garcia was utilized and perfected by Czermak of Pesth who introduced it into general use in 1859 and three years subsequently, the use of the laryngoscope was demonstrated in London and taken up by British physicians and surgeons. Like the ophthalmoscope, the laryngoscope has been instrumental in helping a better understanding, not merely of the local diseases of the organ which it illuminates and brings before the physician's eyes, but also of several nervous diseases as well as of certain abnormal growths in the cavity of the thorax. The use of the different kinds of specula from 1840 for dilating the various natural orifices of the human body has enabled the surgeon to better explore those orifices and cavities, and has rendered an accurate diagnosis of several diseases, with the greatest of ease and very little discomfort to the patient, possible. The clinical thermometer which is such a familiar object in the sick room at the present day is another of those instruments which had its origin in Queen Victoria's reign. Baresprung in 1850 and Traube in 1851 emphasised the fact that the external temperature of the body had certain significance as indicating the presence or absence of some pathological processes

in the body. But as long as there was no easy means of ascertaining the temperature of the body the doctrines of Traube were of little practical use to the practitioner. Wunderlich, however, in 1868 demonstrated his clinical thermometer which placed at the disposal of medical men in a handy form an instrument of great precision and scientific value. The perfection by Marey in 1878 of the sphygmograph described by Vierordt in 1855 added yet another useful and accurate instrument to aid us in the study of circulatory diseases.

But important as these discoveries of instruments of precision have been, they are greatly overshadowed by the progress that has been made in the discovery of the causes of many diseases. The demonstration of the microbic origin of several diseases, and the study of the methods for preventing their development and spread have been the chief feature in the progress of Victorian medicine. Before 1837 physicians understood little or nothing of the causes of epidemic diseases. The theory of specific infection had no doubt been promulgated and various observers had even looked for evidence to prove that specific organisms were responsible agents in the causation of diseases. It was not, however, till 1849 that Pollender, Davaine and Rayer detected anthrax bacilli in the blood and splenic pulp of cattle that died of splenic fever and this formed the first link in the chain of evidence, which in subsequent years firmly established the relations between micro-organisms and diseases. Since that time the science of bacteriology has advanced by leaps and bounds, and we now know the appearance and cultivation properties of pathogenic micro-organisms outside the body as well as their behaviour when inoculated into the human system. The effects of the action and reaction of micro-organisms and tissues of the human body have been better understood. We now know more about the production of toxins and antitoxins, about the storage of the latter in the human body and of that wonderful phenomenon—immunity against further attacks of the same

disease. The way has thus been led to the treatment of certain diseases by antitoxins, while protective vaccinations or inoculations have been placed on a more rational basis than what obtained in the days of Jenner.

A recognition of the true character of typhoid fever with its characteristic intestinal lesion, and its distinction from typhus fever was an important landmark in the progress of medicine in the early Victorian era. French physicians had discovered the intestinal lesion of typhoid, and Louis in 1841 suggested that typhoid and typhus were essentially different diseases. But it is to Jenner who demonstrated the difference between these two diseases in 1849 that we owe the general recognition of the different natures of typhoid and typhus fevers. Following on these came the brilliant discoveries of Pasteur, of the causes of fermentation in 1866 and of the anthrax bacillus in 1877. With these and their splendid sequel the antiseptic and aseptic surgery, which we owe to the immortal genius of Lister I do not want to deal here. The story of that grand scientific event will be told to the readers of the *Indian Review* by Captain Giffard who can do it far better than I can. I only mention it here in order to step on to the next great event in medical history, namely, the discovery of tubercle bacillus by Professor Koch of Berlin in 1882. This was closely followed by that of the bacillus of diphtheria by Klebs and Loeffler in 1883. Previous to Koch's discovery of tubercle bacillus physicians had made several attempts to demonstrate the true nature of tuberculosis, the most brilliant and remarkable of which was the publication of Virchow's views on tubercle in 1850. The treatment of phthisis had also advanced step by step. Codliver oil was recommended and tested in 1839. Treatment in the open and dry climates came into use since 1864. And lastly we had the tuberculin treatment by the discoverer of the tubercle bacillus.

Koch's tuberculin has not fulfilled all the expectations that were entertained about it, but no one

can deny that its manufacture was an important step in the progress of the treatment of that most deadly foe that the physician has to fight against—tuberculosis.

The introduction of digitalis in 1863 by Sutton of nitrate of amyl in 1867 by Lauder Brunton and of strophanthus by Professor Fraser are all important steps in the treatment of heart diseases, while the researches of Corrigan, Christison, Stokes and Kirkes have improved our knowledge of these diseases to a remarkable extent.

Advance has also been made in the treatment of both rheumatism and gout. Treatment of rheumatic fever by salicin and salicylate of soda we have had as the result of pure chance. Dr. Macari of Sardinia recommended salicin as a substitute for quinine in ague. From its use in ague cases it came to be used in all kinds of fevers and then it was observed that, although it was not very efficacious in other kinds of fevers, it had marked effect in cases of rheumatic fever, and since 1875 it has been accepted as the treatment for the complaint. The views of Garrod published in 1848 and again in 1854 shed more light on the pathology of gout and our knowledge of this disease has since been considerably improved by the researches of Dr. Ord and Sir Dyce Duckworth. The two formidable diseases—diabetes and Bright's disease—have also received considerable attention at the hands of investigators. The classical researches of Richard Bright had made the medical world familiar with the main features of the disease which has since been called after his distinguished name. But several minor details connected with it remained to be satisfactorily explained. Much has been done in that direction in the reign of Queen Victoria by British physicians like Johnson, Wilks and Grainger Stewart but a good deal has yet to be done especially in the way of finding out a satisfactory treatment for this grave malady. Our understanding of the nature of diabetes must be dated from the year 1848 when Bernard discovered the fact that the liver formed

sugar. He followed this discovery with another in the following year that puncture of the floor of the fourth ventricle in the brain produced glycosuria. The researches of Bernard have been improved upon by Hughes Bennet and Pavy. The discovery of pancreatic diabetes by Lepine and his subsequent enunciation of the theory of 'the glycolytic ferment' has brought the pathology of diabetes into the region of active controversy. But unfortunately we have made no material advance in the treatment of diabetes and it still remains the chief scourge of educated India.

Addison's description of idiopathic or what is now called 'pernicious' anæmia and his subsequent discovery of that peculiar disease of the suprarenal bodies, which now bears his name, were works done during the reign of Queen Victoria. It was in 1855 that Addison's disease was discovered, and in 1851 Hughes Bennet described leucocythemia, while in 1859 Wilks explained the nature of the disease now known as Hodgkin's disease. But the most interesting work in this branch of medicine was done in connection with the thyroid gland. Sir William Gull's paper, published in 1873 on the "cretanoid condition," occasionally seen in subjects in whom the thyroid gland was absent, first drew attention to this important subject, and in 1877 Ord named the disease myxœdema. Kocher showed that myxœdema was produced by the removal of the thyroid gland in patients suffering from goitre, and Victor Horsley in 1885 produced the condition artificially in monkeys and proved that it could be prevented by grafting of thyroid tissue. This led Dr. Murray of Newcastle to make the suggestions of feeding patients suffering from myxœdema on thyroid gland substance. This suggestion has now been generally accepted by the medical profession with the most happy results and it has laid the foundation for a new system of therapeutics with animal substances.

But the greatest advance of all perhaps has been made in the study of diseases of the nervous system.

It is true that much progress has not been made in the treatment of nervous diseases, but when one compares our knowledge of those diseases at the time of the late Queen's accession to the throne with what we know of them now, one cannot help admiring the rapid, almost marvellous progress, that has been made during the Victorian era. The year of the Queen's accession saw the discovery of the reflex functions of the spinal cord by Marshall Hall.

In 1847 Todd described *tabes dorsalis* and in 1859 Brown Sequard in a paper read before the Royal College of Surgeons explained the discussion of the sensory tracts in the cord and the motor tracts in the medulla. It is impossible to exaggerate the importance of this discovery. But more was to follow. In 1858 Duchenne distinguished between the muscular and spinal forms of muscular atrophy. Three years after this came the description of that peculiar disease which is now associated with the name of its discoverer—Mènière.

From 1860 onwards Hughlings Jackson commenced that brilliant series of clinical observations which established with a fair amount of accuracy the locality of the cortical motor centres, while the classical researches of David Ferrier confirmed and amplified these observations. The great advance in our knowledge of nervous diseases made within the last forty years must ever be associated with the names of these two British physicians Hughlings Jackson and David Ferrier. "To Jackson," indeed, "we owe that profound and metaphysical view of the nervous system which distinguishes the English school." Across the channel in France there was an equally great neurologist who has contributed a great deal towards our present knowledge of the diseases of the nervous system, and that was Charcot. His lectures which began to be published in 1870 will remain for all time to come the classics of neurological literature. While on this subject, I may also mention that it was a British physician Dr. Wilks, afterwards Sir Samuel Wilks, who introduced bromide of potassium in the treatment of epilepsy in 1862, while another

British physician, Dr. Wood of Edinburgh, first introduced us to hypodermic medication.

While the progress we have made in our knowledge of diseases, their pathology and their diagnosis, have been rapid and satisfactory, quite the reverse is the case with the progress of their treatment. Treatment, certainly, has not kept pace with diagnosis. To the lay mind accustomed to see the glaring advertisements of hundreds of new remedies this statement may seem extraordinary. But the progress of scientific pharmacology and therapeutics ought to be carefully distinguished from the achievements of "enterprising commercial therapeutists." For, as Professor Fraser once observed:—

"It is in the department of therapeutics that shallow pretensions have for centuries been, and still continue to be, more boldly and skillfully advanced than in any other. Suffering humanity is naturally anxious for relief, and only too prone to believe assertions dogmatically expressed and accompanied with explanations observed by a bold misuse of scientific phraseology. These are however the artifices of mere charlatans; but I am not sure that our profession is altogether blameless in the matter. The keen competition and the desire for novelties, which remain as prevalent now as when the Athenians of old clamoured for new things and new doctrines, supply temptations the effect of which may not infrequently be observed in the readiness with which any new remedy becomes fashionable, provided its recommendation is accompanied with the assertion that its administration in a few cases was followed by the most marvellous benefits. It must be admitted that at no previous time in the history of medicine have the temptations been so powerful to yield to this form of professional charlatanism. The advance of organic chemistry had led to the production of an almost unlimited number of substances of complex constitution; and as probably no substance is incapable of producing some perturbation in the physiological conditions of the body and thus of modifying some of the conditions of disease, it is not remarkable that enterprising commercial therapeutists should within the last few years have recommended to our notice more than a hundred new products whose aggregate application, one would fancy, should already have made nature immortal, and death-play for lack of work."

But even in the departments of pharmacology and therapeutics some important scientific advancements have been made. The "recognition and application of the fact that all remedies have definite localities of action, within which their qualitative effects are produced" is an important step which harmonises the treatment of diseases by drugs with the doctrine "that all diseases are the

results of changes in definite localities." Taken on the whole medicine has advanced considerably during the Victorian era and that along several directions. That progress can best be summed up in the language of Professor Huxley :—

"The search for the explanation of diseased states in modified cell life, the discovery of the important part played by parasitic organisms in the etiology of disease, the elucidation of the action of medicaments by the methods and data of experimental pharmacology appear to me to be the greatest steps that have ever been made towards the establishment of medicine on a scientific basis."

T. M. NAIR.

### THE CENTURY AND YOUNG BENGAL.

THE opening year of the New Century is not an inopportune moment for taking stock of the good and bad points which characterise that most interesting product of English education and western civilisation which is familiarly designated Young Bengal. The Bengalee is not improperly regarded as one of the most intelligent and receptive of Indian races, and the question of the success or otherwise of the system of engrafting western education upon such a fertile eastern soil possesses a deep interest for all students of history. The following pages, containing a short summary of the history of the rise, progress and evolution of Young Bengal, are written with the object of helping the reader to solve that question on his own account.

A few words as to the state of things which obtained in Bengal immediately previous to the introduction of English education may not be altogether out of place in order to prepare us for the changes brought about by it. The country in general was steeped in the deepest ignorance, what little of learning there was being confined entirely to the fossilised Brahmins of the *toles*, whose beliefs consisted of a mass of absurd superstitions and whose practices were deemed to be sufficiently praiseworthy if they conformed to some unmeaning Vedic ritual. Nadia was the most famous seat of learning where, in the court

of Maharaja Krishnachandra, the Maecenas of Bengal, the greatest Bengali poet of the eighteenth century, Bhāratchandra, flourished and wrote his poems. These poems give us a fair idea of the moral tone of the society at the time, and it would not be the language of hyperbole to say that the tone was anything but wholesome. While the Pundits all over the country were wholly engrossed in logic-chopping and wrangling over some aphorism of Kapila or Badarayana, the great middle class with whom the struggle for existence had not become so keen as now, passed their days in a sort of *dolce far niente* between pompous religious ceremonies on the one hand and social pageantries, with an occasional dose of caste-intrigue, on the other. The will and the capacity to think for the country as a whole were both wanting, and the power of organisation for some common good was equally conspicuous by its absence. Nevertheless it must not be presumed that in those good old times everything was for the bad. 'Auld lang syne' calls up many noble qualities which we seek for in vain in a modern Bengalee Babu. The standard of morality was lower, but there was greater sincerity. Cosmopolitan fellow-feeling had yet to grow, but there was greater good feeling among the members of the same family and the inhabitants of the same village. If there were wanting noble aims and aspirations, there was less of active discontent. The mental training of the people might be lamentably deficient, but their physical development was certainly better. They were superstitious, no doubt, but the religious feeling was more deeply ingrained in their minds. They had less of independence, but more of affection and reverence. But of this more hereafter.

The establishment of the Hindu College in the year 1824 brought about a great change. The spirit of reaction set in and the intellect of the Bengalee so long held in subjection by degenerating superstitions and foolish dogmas, began to revel in its new-born freedom and not unoften abused it by going to extremes. The



change from the old order to the new, as illustrated by the character of the students of the newly-created Hindu College, has been very ably described in a Bengali book\* from which we translate the following passage:—

The cause of this revolution was two-fold: the first was the influence of Derozio, the renowned Professor of the Hindu College; the second was the introduction of western literature and philosophy. . . . As there were many praiseworthy traits in Derozio's teaching, so there were many grave faults. He infused into the minds of his students more of liberty than reverence and self-control. Derozio had no knowledge of the Hindu *Shastras*, and unable to divine the hidden purpose of their authors, he regarded all their opinions as wrong and superstitious. Though learned and intelligent, he had not the sobriety and experience of mature age. He decided on many things with the insolence and light-headedness peculiar to youth. In attempting to maintain the supremacy of reason and common-sense, he wanted to dig up by the roots the conclusions arrived at by the authors of the *Shastras* as the result of their experience acquired through many centuries. The upshot of this teaching was, that his students exhibited the greatest lawlessness while professing to reform errors and superstitions. They understood liberty to mean license, and reform wholesale uprooting. In going to disown the 330 millions of Puranic gods, they became sceptical even of the existence of the supreme deity; and because superstitious customs like the *Suttee* had prevailed in Hindu society, they began to regard every custom prevalent therein as superstitious. Drinking, eating beef, and partaking of food cooked by *mlecchas* they took to be the height of social reform. Some of these conceived the strange notion that, as the beef-eating races had always triumphed over the other races in this world, the Bengalees had no chance of improvement unless they took to beef-eating. Nor did they hesitate to carry out this strange notion into practice. Forming themselves into groups they ate beef and sometimes threw the remains into their neighbours' houses, and by acting directly against the rules of society, gave proofs of their lawlessness (in their opinion moral courage). Their example soon spread among the students of the other institutions. Every household in Calcutta was agitated, and many parents became afraid of giving their children English education."

The celebrated resolution of Lord William Bentinck, dated the 7th March 1835, by virtue of which western and not oriental learning was decided upon as the fittest to be imparted to the people of the country, inaugurated a momentous epoch in its history. After twelve years of earnest discussion in which the greatest Bengalee of modern times, Raja Rammohan Roy, enthusiastically espoused the cause of western education, the question was decided by the vote of Lord Macaulay

in its favour. It is interesting to read in this connection the memorial which the great Raja submitted to the government against the establishment of a Sanskrit school in Calcutta:—

"This seminary" said the Raja, "similar in character to those which existed in Europe before the time of Lord Bacon, can only be expected to load the minds of our youth with grammatical niceties, metaphysical distinctions of little or no practical value to the possessors or to society. The pupils will there acquire what was known two thousand years ago, with the addition of vain and empty subtleties since then pursued by speculative men such as is already commonly taught in all parts of India."

The effect of this authoritative introduction of western education has been graphically described by the able biographer from whom we have already once quoted:—

The teaching of Derozio had caused a change in the outward manners and customs of the newly-educated class; the resolution of the government brought about a new epoch in their thoughts and feelings. Averse as they already were to study the *Shastras* and other books of their own, the publication of the government resolution made them unwilling even to touch a Sanskrit work. . . . The English were their models, and when Lord Macaulay . . . in his usually exaggerated style said 'A single shelf of a good European library is worth the whole native literature of India and Arabia' . . . and Alexander Duff added that the eastern languages were all mighty, unfathomable and boundless like the ocean but that, in spite of his prolonged search, he could not find any pearls in it . . . they actually thought that there was nothing worth learning in Sanskrit literature . . . and that it was full of discussions on the *kusa* grass and descriptions of the ghee, milk and curd oceans, but contained nothing more. Under this belief, baffled in their hunt after pearls in the *Ramayana* and *Mahabharata* and the *Bhagavadgita*, they began to search for them in the *Iliad*, *Æneid*, and the novels of Fielding. They became convinced that the *Pundits* learned in Sanskrit lore were very much to be pitied, and that the cultivation of that language was a sign of foolishness. Far from trying to get an insight into their own poetry and mythology, they prided themselves upon their ignorance of these subjects. When such was the fate of the language of Valmiki and Vedavyasa at their hands, that of their poor mother-tongue needs no description. Many well-known students of the Hindu College could not write their names correctly in Bengali . . . Bengali books were banished from their shelves, and they began to think it insulting to speak or correspond with each other in Bengali. What we have called the revolutionary age was thus completed."

But while we have been busy describing the evil effects of western education upon the first batch of Young Bengalees who received it, we must not forget that except in two or three instances, every step in the direction of progress which was taken in Bengal, twenty years ago, originated with some one or other of the stu-

\* Life of Michael Madhu Sudan Dutt by Jogendranath Basu, B. A. (in Bengali) Second Ed. pp. 27-28.

dents of the old Hindu College. In spite of their erratic tendencies, they were all fired by generous enthusiasm and noble aspirations, and, what is most to be admired, they had the courage of their convictions. Generally speaking, they did not go wrong, but went too far. What they required was not out-and-out suppression, but moderation and guidance. We will see later on how the inebriated minds of these young men, drunk with the fervent flow of Milton and Byron and the glowing periods of Mill and Burke, gradually recovered their sobriety and learnt to mitigate their ardour. And still later we will see how this process of cooling down has gone on, till at last with the end of the century, seventy five years after the gates of western thought were first thrown open to us, the zeal and ardour of those new beginners have become all but extinct, and one would give much to get them back. But we must not anticipate.

The men by whom the Bengalee is known outside his own province, most of them, belong to this period, whether in literature, politics, administration, social and religious reform, or in any other department. We will only mention some of the greatest names of this, the first generation of Young Bengal. Michael Madhusudan Dutt was the greatest poet and linguist that Young Bengal has produced. Kristodas Pal was one of our greatest patriots, using the term in its truest and most exalted sense. Hurrish Chandra Mukherjee was the pioneer and one of the ornaments of journalism in Bengal. Justice Dwarakanath Mitter was the best native judge that has adorned the bench of the Calcutta High Court. Keshub Chandra Sen and Isvara Chandra Vidyasagar were respectively the greatest religious and social reformers of Young Bengal. The ability, the independence, the noble self-sacrifice and the zeal for progress displayed by these and others, not less worthy than they, brought the Bengalee to the fore-front of the Indian races, and even secured for him the respect of his proud rulers.

The establishment of the Calcutta Univer-

sity in 1857 was a further step in advance, and though most of the greatest men mentioned above had attained to manhood before that date, some of the most honoured names among us belong to the post-University period. More than a quarter of a century's English education had sufficiently awakened the minds of the Bengalees to its deficiencies, and a counter-current had now set in in favour of what was best in our country's own. The glamour had vanished from their eyes and they could now see that all that glittered was not gold, and everything English was not perfect. The class of men who now sprang up as the first fruits of University education united in them, to a great extent, the good results of both the western and the eastern systems. Whether in politics, literature or social and religious reform, it came to be understood that drastic changes and utopian ideals defeat their own end, and that the best policy was to proceed by way of cautious reform, not wholesale subversion. Nowhere was this change of feeling more marked than in the domain of literature. The study of Sanskrit once more came into fashion, and with it the cultivation of the mother-tongue, Bengali. The greatest Bengalee novelist, Bankim Chandra Chatterjee, belongs to this period, and he adopted a mixture of the English and the Sanskrit styles of composition which has been accepted as the model of what modern Bengali style should be. Though Christianity could never proselytise many Bengalees, it must be remembered that men like the Rev. K. M. Bannerjee and Rev. Lal Behary De had embraced it. But Young Bengal in the second generation was soberer than in the first in respect of its religion also. While accepting Christ as one of the greatest and noblest teachers of humanity, they gave a similarly high place to some of their own countrymen, such as Buddha and Chaitanya, and came to entertain a greater feeling of respect for the *Shastras*. Similarly in social reform, beef-eating in itself was no longer regarded as a thing worthy of admiration. The advocacy of a

measure of reform came to depend not only upon its intrinsic worth, but, to a great extent, upon its feasibility, and the nature and the amount of the benefit to be derived from it. In politics there sprung up a set of men who, like Mr. W. C. Bannerjea, the late Mr. Manomohan Ghose and others too well known to need mention, are pre-eminent for their ability, integrity and moderation.

This, the second generation of Young Bengal, besides attaining to some of the highest positions in their own province, have also held important posts all over the native states in India. There are still Bengalees who are at the head of their respective professions in the Punjab, the North-Western Provinces, the Central Provinces and Burmah. But such will not be the case in the future. Able and educated men have sprung up even in the most backward provinces, and in the keen struggle for existence, the indigenous element, if equally efficient, will naturally oust the Bengalee usurper. But even then the glory of opening up the path will remain with the Bengalee, and he will always be gratefully remembered as the pioneer of western light and culture in these provinces.

We will now deal with the third generation of Young Bengal,—the generation that has attained its prime during the closing years of the nineteenth century. The main characteristic of the generation, we are sorry to say, is a conspicuous want of vitality. Degeneration is the order of the day. True, English education and western civilization have spread like wild fire, and leavened almost all the classes of society. But the defects of a purely literary education are now clearly seen, and the general incompetency of our graduates has led many to think of industrial education as the best suited for our present needs, and three or four technical schools have already been established. The middle class gentry, forgetting all false ideas of respectability are taking to trade in ever-increasing numbers, but they seldom possess the capital and the training necessary for commer-

cial success in these days of machinery and keen competition. Our zemindars, who alone can supply the necessary capital never think of opening their purse-strings unless there is a Rajaship in sight, for though some of them are well educated and possess generous instincts, the majority are good for nothing. Several joint-stock companies were established in Bengal, but almost all of them have proved failures. The presence of educated young men in those concerns has not improved the situation,—witness the Tarakassur-Mogra (native) Railway Company and the Match factories established at Salkea. The truth seems to be that the capacity for business which characterised men like Ramgopal Ghose is lamentably wanting in the Bengalee Babu of to-day. Europeans, Parsees and Marwaris drain all the wealth of the metropolis of India while the Bengalee Babu never thinks of aspiring to anything higher than a clerkship in one of their vast establishments.

In literature, too, though the great masters of the second generation are not all dead, specially in the domain of poetry, their pen has long ceased to bring out anything really worthy of preservation. We have seen how grossly the Bengali language was neglected by the first generation of Young Bengal. No such charge could be laid at the door of the present generation, for the cultivation of the mother-tongue is no longer regarded with contempt and a considerable number of our young men write fine poems in Bengali and regularly contribute to the pages of the numerous Bengali monthlies. But what we have gained in quantity we seem to have lost in quality, for very little of what is now written in Bengali is destined to live and take rank with the productions of the dead and dying masters. It must not, however, be forgotten that Bengali prose, practically speaking, was non-existent before the time of Raja Ram Mohan Roy, and what vast strides has it made since! Our vernacular literature now boasts of so-

many good books that the Calcutta University was asked to introduce it as one of the subjects for the B. A. and the M. A. examinations. It is already one of the optional subjects in the F. A. examination for women. There are two literary academies in Calcutta where a good deal of useful work is being done, and where the culture of the country is fairly well represented. Another sign of the times is the fact that our educated young men no longer display that amount of eagerness to write in English which marked the generation to which the late Rev. Lal Behary De and Dr. Sambhu Chandra Mukherjea belonged. In this respect our young men of to-day are wiser in their generation. They well know that it is idle to expect to enrich the English language or to earn a lasting reputation by their English compositions, and that the labour and trouble thrown away in such vain attempts may with much greater profit be bestowed in the cultivation of their mother-tongue. This, no doubt, is a change for the better.

The morality of Young Bengal of to-day is on the whole superior to that of the generation previous. Drunkenness and sexual immorality prevail, we believe, to a lesser extent. But that is not enough. The life, the ardour, the enthusiasm for a noble cause which distinguished the earlier generations, have become all but extinct. The present generation is a most properly behaved set of young men, but without any originality. There is no striking difference between man and man, and the lives they lead are as nearly alike as machine-made articles. The same dead level of uniformity prevails among them. The fact is that a keen struggle for existence does not allow their thoughts to travel beyond their daily necessities, the procuring of which remains the all-important question with them for the greater part of their lives. And with education opening up their minds to comforts and refinements unknown before, the inability to secure them makes them unhappy and discontented and, above all, deprives them of that feeling of self-respect which is at the root of all self-improvement.

Hence it is, that though they are all *respectable* men in a certain sense, they are tending every day to degenerate into *little* men, unworthy to be compared with the Titans of the preceding generations. The vast increase of University education has caused an overcrowding in all the learned professions, specially the bar, and any one acquainted with the profession knows that such a state of things is not conducive to the growth or maintenance of healthy morals among its members.

This leads us to a consideration of our attitude in regard to politics. Bengal has furnished some of the best public men that India has ever had, beginning from the days of the Hon'ble Kristodas Pal to those of the Hon'ble Surendranath Bannerjea. Their zeal, their earnestness, their eloquence and their ability are known all over the empire. But nowhere is the degeneration of which we have been speaking more marked than in this respect. The present generation has not produced a single Bengalee who shows signs of attaining to the eloquence of a Keshub Chandra Sen, a Lalmohan Ghose, a Surendranath Bannerjea or an A. M. Bose. Nor is the self-sacrificing zeal of our patriots to be found among the youth of to-day. In fact 'patriot' and 'politician' are opprobrious nicknames. A man who takes any interest in politics is dubbed a 'faddist'. Even those who do take an interest in it, regard it more as an amusement to while away an idle hour than as a business for a life-time. 'The country's cause' is decried as mere sentimental twaddle. Nothing is more certain than that the present generation has produced absolutely none who can replace our great political leaders of the previous generation who in the natural course of things, cannot be expected to live much longer. We are becoming 'practical men of business' and do not like jabbering. In other words, we are becoming mere time-servers, and have neither the heart to think for others, nor the courage and the ability to speak like our leaders.

'Moderation' 'sobriety' and 'practical sense' have become our watchwords, but translated into the language of actuality they mean nothing but cowardice and selfishness. The sad want of the power to combine is another cause of our downfall. Our political workers are divided into a hundred and one parties and factions, which have been augmented tenfold by that veritable apple of discord—the extension of the franchise. Our newspapers are constantly falling out against one another, so that some of them have become a positive nuisance to the community.

As regards the physical condition of the average Bengalee of to-day, it is an undoubted fact that it has deteriorated a great deal. We need not call up instances from the remote past. Our grandfathers and grandmothers are not all dead; and their good health, longevity, keen eye-sight and clear headedness excite our wonder and admiration. Excessive study, insufficient food, and constant anxiety as to how to make both ends meet are among the causes which lead to an early breakdown. Young Bengal has, it is true, taken very kindly to athletic sports of all sorts, and there is hardly a village in the remotest interior where even the plough-boys do not know something of the game of cricket, and instances are not wanting where the Bengalee has excelled in feats of daring and physical ~~powers~~<sup>power</sup>. Bose's Great Indian Circus party, Professor Shyamakanta Bannerjea, the tiger-tamer and Lieutenant Sureschandra Biswas of the Brazil Army are instances in point. But considering the population of the country their number is infinitesimal. The bottom fact is that the majority of our countrymen are so poor that they are not properly nourished from childhood, and so grow up into tiny weaklings, making themselves the butt of foreigners like the late Mr. Steevens of the *Daily Mail*. So long as the root of the evil is not eradicated athletic sports alone will not stop their physical deterioration.

We look in vain for social and religious reformers of the type of Keshub Chandra Sen and

Isvara Chandra Vidyasager among the young men of the present day. They are too busy with their own concerns to think of these things. The Bramho Samaj is no longer the popular institution it once was, and makes fewer and fewer converts every year, while a party of Hindu revivalists has sprung up which has taken to missionary work and now counts among its followers a considerable number of our educated young men. But there is reason to fear that on the whole we are becoming more and more godless every day. In the words of a celebrated Bengalee humourist;—\*

About infant-marriage and widow remarriage  
We entertain enlightened views,  
But we act accordingly if you think  
Then you are an awful goose.  
We read Mill, Hume, Spencer  
For no religion do we care  
We hoot alike Hindus, the Buddhists,  
The Mahomedans, Christian and Jews,  
But bow not before the idol, if you think  
Then you are an awful goose!

Indeed, the Bengalee of to-day has really no principle to go by. He acts as suits his convenience best. In his heart of hearts he feels perhaps the justice and the need of reforms like widow-marriage and sea voyage, and in the principal towns has generally no objection to dine in company with an England-retained gentleman or otherwise mix with him, but at his home and in his village he is yet too much the slave of custom and his social surroundings to dare to repeat it. It must be said, however, that the agitation of the Bramhos has not been altogether fruitless. A pure life is now valued more than a cartload of precepts. The futility of most of the Puranic ritual is now seen through, infant-marriage is becoming rarer every day, and most of our girls are receiving some sort of elementary education, whereas some of them have attained the highest honours of the university. Bigamy is well nigh extinct among the educated classes. But all the same, religion has ceased

\* Mr. Dwijen Lal Roy, M.A., &c. in his poem 'Reformed Hindoos' written partly in English and partly in Bengali. The Bengali portion in the above extract has been translated into English.

to be a vital force among the new generation. To sum up, considering the situation from all points of view, the century does not seem to open with any very bright prospects for the Bengalee. As we have seen, the signs of degeneration are apparent everywhere. It behoves Young Bengal of to-day to shake off the lethargy which has overtaken them, and take their place once more in the front rank of all the Indian races. Let them acquire the grit of the Mahratta, the commercial instinct of the Parsee, the splendid physique of the up-country man, the simplicity and the colonising spirit of the Madrassite, and the power of combination of the Mahomedan everywhere, and unite to all this their ready adaptability and quick intelligence, and they will regain in no time what they have lost in the estimation of the world, and, instead of exciting a smile of contempt, they will command the respect of all who know them.

JNAN CHANDRA BANNERJEE.

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#### DR. POPE'S TIRUVACAGAM.\*

It is to the great credit and piety of Dr. Pope that he undertook to do an arduous piece of work at an age, when men are mostly incapacitated for any work. It is his love for our Tamil literature that has kept him on during this work. A profound scholar, a man of the kindest disposition, and one possessed of the firmest convictions, his work has all the advantages of having emanated from a truly great man. Like many missionaries, he did not undiscerningly condemn all that was foreign to Christianity; he did not grudge to allow credit to what was ennobling in other religions. If there are some instances in which he has not given due credit, to such portions of foreign literature, it is not due to any malicious intent on his part; it is simply due to the apathy of, and partial insight into, that particular thing. "If the Tamil people and the English are ever in any degree to understand one another, and to appreciate each other's

thoughts and feelings regarding the highest matters; if any progress is to be made in the development of a real science of Hinduism, as it now is, our English people must have the means of obtaining some insight into the *living system* which exercises at the present day such a marvellous power over the minds of the great majority of the best Tamil people." It is with this conviction that Dr. Pope has edited the works of Manikka-Vaṇagar.

Nothing need be said about the original. It is too well known to us. The greatness of the work as of its author is very adequately appreciated and praised by the knowing as well as the ignorant amongst us. "The effect therefore of these songs—full of a living faith and devotion—was great and instantaneous. South India needed a personal God, an assurance of immortality, and a call to prayer. These it found in Manikka-Vaṇagar's compositions." Dr. Pope's edition of the work is an extremely fine one. Printed in bold types with unusually large margins, it is really a pleasure to go through his edition of the work. The classification of the several portions of the work is not clumsy as it is in the Indian editions. He has given the least trouble to the reader. The lines of the text are translated into the same number of lines in English, and the translation is given just below the text. Nor has he failed to give his learned notes on the text at the foot of each page, whenever necessary. The translation is a free rendering of the original, and has not in many cases failed to reproduce the beauty and sublimity of the original. The volume contains the life of the author, a Lexicon and Concordance, together with appendices illustrating the great South Indian system of Philosophy and Religion called the *Caiva Siddhanta*. On the whole, it needs no saying that the work has received careful editing in his hands.

It is not strange that Dr. Pope should have given an accurate rendering of Tiruvacagam in English; he had already prepared himself for the work by having translated Kural and Naladiyar. Hymn XXXVII Verse. 1, may be given as a fair specimen of his translation:—

O King of those above !—O ceaseless Plenitude  
Of mystic bliss !—To me defiled Thou com'st  
Fruit newly ripe, and mad'st me Thine own dwelling place  
Balm, yielding bliss all earthly bliss beyond !  
True meaning's certitude ! The foot in glory, bright !  
My wealth of bliss ! O Civa-Peruman,  
Our very own, I've seized thee,—Hold thee fast ! Henceforth,

Ah, whither grace imparting wouldst thou rise ?

We can confidently state that this is more than a translation. There are many other verses of the

\* The Tiruvacagam; or Sacred Utterances of the Tamil poet saint and sage, Manikka-Vaṇagar: with English translation, life of the sage, introduction, notes, etc., etc., By the Rev. G. U. Pope, M.A., D.D. (The Clarendon Press, Oxford, Price 21/-)

same kind. But there are instances where Dr. Pope has either misunderstood the meaning of the text, or has not caught the vigour of the original. In Verse 41 of Hymn VI, 'Like Crocodiles' goes with 'I', according to Dr. Pope, quite contrary to the meaning of the text; and the word 'முதலை' strictly speaking means here, 'red pith' and not crocodiles. In Verse 6 of Hymn XXVI, 'Forgot' is not the proper rendering of the original. The translation of Verse 4 of Hymn IX has altogether failed to reproduce the vigour of the original. But there are faults in everything. And so, we congratulate Dr. Pope on the success with which he has translated the spirited original.

Dr. Pope is again of immense service to us in having explained the several metres which the author has employed in his work. The explanation is concise, instructive, and in most cases correct. 'The first poem is in 'Kalivenba metre' says Dr. Pope. We are sorry to say that it is in 'Pakhradaivenba' (பஃருடை வெண்பா) metre, and the last foot in every alternate line of a Kalivenba, should rhyme with the initial foot of the two lines; and it is not the case here. It doesn't much matter, for the distinction is only modern, and ancient grammarians, did not make much difference between the above two metres; and Dr. Pope like many others, has lost sight of this difference. Granting his own metre, Dr. Pope has gone wrong in not having doubled a letter in line 18 of Hymn which should run as "அவனருளாலே அவனருள் வணங்கி" Even in common Venba, it would not scan without it. But such instances are few. And we cannot adequately pay for Dr. Pope's labours. His patient study of, and his loving admiration for, Tamil literature has endeared him to us; and such trifles cannot be counted as faults in that scholar who says 'I date this on my eightieth birth day. I find my first Tamil lesson was in 1837. This ends as I suppose a long life of devotion to Tamil studies. It is not without deep emotion that I thus bring to a close my life's literary work.' Perhaps Dr. Pope wants some rest from labours of any kind, and may God grant him a peaceful life on earth for many years to come.

The most important of all the portions of the work is Dr. Pope's Life of Manikka Vaçagar, and notes on the Caiva Siddhanta system of religion and philosophy. On page 16 of the introduction Dr. Pope doubts if Tiruvathavurar was the name of our sage. Ignorance of some of the customs of India has only led him to write like that. It is usual to apply the names of the gods of particular localities to those born there. The God of Vathavur was Thiruvathavurar, and that name was applied to our

sage. The date of his existence is given as "150 or 200 years before 1030 A. D." He has not proved it, but with the natural propensity of a Missionary, he was led away by the prejudices of his class to make our sage live as late as possible in the Christian Era. Just as it is natural for a Hindu to antedate all things modern, so it is natural for a Christian Missionary to attribute a later date to all things ancient, and which belonged to foreigners. It may confidently be said to have been proved that Manikka Vaçagar lived in the beginning of the Christian Era. Dr. Pope graphically describes all incidents beginning with the sage's youth, his conversion, events in Madura, incident of the horses, his ministry, the famous discussion with the Buddhists, up to his beatification.

Speaking of the nature of the poems, Dr. Pope says 'There is in them a strange combination of lofty feeling and spirituality with what we must pronounce to be the grossest idolatry.' Mark the word *we*. If Dr. Pope had meant by it the Christian nations, we have not much to say against it; for it is natural for one nation to look down upon the religious institutions of the other with contempt. But if *we* means something else, the statement of Dr. Pope may be said to be founded upon prejudice. He goes on criticising the explanation of the symbols, as given by us. He says: "It is sometimes thought and said that the idols in these temples are mere signs representing as symbols the Divine Being and some of his works and attributes. This is not altogether an adequate statement of the case . . . . . We shall understand with what profound awe and enthusiastic affection even images to us most unsightly can be beheld by multitudes of good and excellent people." We cannot see what reasons have led him to refute the above explanation. He has not given us adequate reasons. But, to mend matters, he has said:—"And somehow the error and folly and idolatry often seems to be but the accompaniments of what is mainly most worthy." We cannot at all agree with Dr. Pope in this instance. The above is rather a hasty statement.

"It is much to be desired that our friends in South India should recognize this, and consent to enter upon a thorough scientific investigation of their popular beliefs, the precise import of symbolical expressions, and the practical bearing of every portion of their wonderful 'Siddhantam'." And it is only Dr. Pope that has performed this arduous task. It is not an easy work. It would have exacted tremendous amount of labour from him. After careful sifting he came to the conclusion that:—"The sacred mystic poetry of a people reveal their character and aspirations more truly than their

secular legends and ballads; for sacred hymns are continually sung by the devout of all ages, and both sexes; and all classes of the community are saturated with their influence.' So he has attentively considered and studied this system, and has presented us with a clear account of the Siddhantam, the expounder of which was our sage, and which Dr. Pope has taken pains to present to us in a clear form.

Dr. Pope has done well to contrast the Jain works with the works of the devout Saivaites. "They were clever, pointed, elegant, full of satire and worldly wisdom, epigrammatic, but not religious." Not so the songs of Manikka Vaçagar. They are full of a living faith and devotion. It is such kinds of songs that are ennobling to the intellect and the heart.

Next, Dr. Pope dilates upon the influence of Bhagavad Gita in the songs of Manikka Vaçagar. 'Civan' takes the place of Krishna, and a great deal, which I cannot help regarding as of exceeding value is added; while much unbefitting and obsolete (I must be pardoned for a candid expression of feeling) Pauranic mythology and legend is dragged in, as simple poetic embellishment designed to please the multitude. First of all, we must thank Dr. Pope for such a candid expression of feeling as this. But we cannot pardon him for the use of 'which I cannot help regarding as of exceeding value.' Perhaps Dr. Pope didn't like to see, 'a great deal of exceeding value' in the songs of our sage. Perhaps Dr. Pope never intended to see such high truths in a mass of 'unbefitting and obsolete Pauranic mythology'. We don't know what; but we wish that Dr. Pope should have given credit to the sage, for having mixed up the most pleasing Pauranic mythology (myth though it is), with the abstrusest of truths. Dr. Pope might be aware of the fact that truth presented in its naked form is most unacceptable. He might have forgotten it, when he wrote this condemnatory sentence on the work of our sage.

On the other hand, we feel extremely thankful when the Doctor says "One touch of nature makes the whole world kin, and no one can read the sage's verses without profound emotion. Scarcely ever has the longing of the human soul for purity and peace and divine fellowship found worthier expression." And "The songs remind one most forcibly of the confessions of St. Augustine, and we cannot help saying that, in our Tamil sage, we find a spirit congenial to that of the great Doctor of the West."

The last point to be discussed in this connection is the affinity of the Caiva system to Christianity. Dr. Pope is at present more guarded than he was a

few years before, in writing about this point. Dr. Pope says "It will be seen how very near in some not very unimportant respects the Caiva system approximates to Christianity." But Mr. Innes, in the *Indian Magazine and Review*, is unreasonably bold to say: "Looking at the collection as a whole, it may be said that in ideas, aspirations and language, there is much that points to the influence of Christianity in the early centuries of our era upon the minds of the races of Southern India." Why! One who says that Manikka Vaçagar is a precursor of Sankaracharya is the best judge on these matters. A little of insight into our literature, the influence of Sanskrit on it, and the history of India would have saved him from this haphazard statement.

We cannot see how conclusions like these are derived from the existing state of facts. Perhaps men of the stamp of Mr. Innes are bent upon attributing whatever is good in our literature and religion to Christian literature and religion. And for this purpose, Manikka Vaçagar has been made to live some seven or eight centuries after the real date of his life. It is agreed on all hands by men competent to judge of these matters, that the sage lived about the beginning of the Christian Era. If so, how is it possible that there should have been Christian influence upon these collection of songs? Mr. Innes says, "There is 'faith,' 'grace,' 'vicarious sacrifice' and 'everlasting salvation' in these hymns." Is there no 'faith' in our religion, no 'grace' in our religion? The doctrine of grace was taught in India by Sri Krishna long before Christ appeared on earth. And so every one of these doctrines, though not native to the Tamilians, were acquired by them from the literature of the Sanskritists. There is no probability of Christianity to have influenced our sage's mind; for Christianity itself was not enough developed, when our revered sage composed these songs.

On the whole, Dr. Pope should be congratulated on the success of his undertaking. We cannot adequately praise the merit of his work, the sympathy with which he views the literature of other nations, and his self-sacrificing labours. We hope that the work will have a wide circulation amongst all those, who are lovers of Tamil literature, and are interested in the well-being of India. No other Tamil work has been so well and so carefully edited as the present one. And no other work can compare with this in the sublimity and beauty of the religious sentiment. And Dr. Pope has chosen well to edit the best of all the works in Tamil literature.

V. G. SURYANARAYANA SASTRI.

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The World of Books.

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SHAKESPEARE'S LIFE AND WORK. By Sidney Lee (Smith Elder & Co., London 1900.)

This is, as described on the title page, an abridgment, chiefly for the use of students, of the Life of William Shakespeare which Mr. Lee published two or three years ago. The discussion of some of the Shakespearian problems is, in this edition, curtailed, and foot-notes, which were conspicuous in the original volume, are here almost entirely dispensed with, but practically everything that the general reader could desire has been kept, and except for scholars this cheaper publication will probably displace its predecessor. As to the book in general it must be sufficient here to say that it is excellently printed, that it is perhaps the most up-to-date treatment of Shakespeariana within the purchasing power of Indian students, and that it shows on every page research and thought. Special reference may be made to a few disputed points on which Mr. Lee's views will be of interest.

He defends the traditions that Shakespeare poached at Charlecote, that on his leaving Stratford he was for a time a country schoolmaster, that his first connection with London play-houses was as holder of the horses of visitors outside the doors. But he dismisses as fanciful the theories that he was employed in a printing office or as a lawyer's clerk. He doubts the alleged visits of Shakespeare to Scotland and Italy. He deposes *Titus Andronicus* from the place which many give it, of being the earliest of Shakespeare's plays, putting it seventh in the list, though only two years later than the first, *Love's Labour Lost*. He departs at many points from the order and dates assigned to the plays by other scholars, inclining perhaps to put the early plays a little earlier and the late plays a little later than most of his confrères. But the most noticeable cases of divergence are that he puts *Midsummer Night's Dream* as late as 1594-5, after many plays usually regarded as earlier; and brings *All's Well that Ends Well* forward from Dowden's date, 1601 to 1595. He regards *The Tempest* (1611) as the last of the plays of which Shakespeare was the sole author, *Two Noble Kinsmen* and *Henry VIII* while containing some of his work being mainly by Fletcher. It may be added that Mr. Lee holds that *Timon of Athens* and *Pericles* (both 1608) were written by Shakespeare in collaboration with some other playwright.

Mr. Lee gives his strength to the great sonnet-controversy. He certainly throws a great deal of light upon sonnet-writing in the last decade of the sixteenth century, and it may be that his theory will win wide acceptance. His arguments

have not convinced the champions of rival theories and he is not without joints in his harness which make him vulnerable. The problem will probably be still discussed a century hence. His views may be thus summarised. The mass of Shakespeare's sonnets were composed in 1594 when sonnetteering was a fashion at the height of its vogue. Shakespeare took the conventional subjects of sonnet-writers and many of their conventional conceits, and indeed freely 'conveyed' their very words and phrases. Most of the sonnets are merely professional exercises on the regular themes, a poet's immortality and the unkindness of a mistress, and the sentiment they breathe is not genuine. One of these ordinary themes does seem to awaken some real feeling—the praise of a patron, and fear lest another poet should carry off his patronage. The patron is the Earl of Southampton, the poet Barnabe Barnes. One group of six sonnets, Mr. Lee acknowledges, does show original sentiment. These are the sonnets which treat the theme of the poet's mistress having corrupted 'his next self his friend,' and drawn him from his side. Mr. Lee thinks that the fact that this theme is not treated elsewhere may indicate that it is a personal experience of the poet. But he would not have us treat the episode too seriously. Another poet who called himself 'Henry Willobie' and wrote a long poem reproaching his 'Avisa' for his coldness to him refers to W. S. who had been 'tried by the courtesy of the like passion and was now newly recovered of the like injection.' Mr. Lee identifies this W. S. with the great dramatist. With regard to the Dedication of the Sonnets which has so long been the battle-ground of rival theories, Mr. Lee has his own views. He holds that Shakespeare had nothing to do with it, that its writer was the T. T. whose initials are at its foot, that is, Thomas Thorpe, the pirate publisher; and that 'Mr. W. H.', the only begetter of these insuing sonnets upon whom all happiness and eternitie promised by our ever-living poet, is no aristocratic patron but William Hall, a stationer's assistant, who had in some underhand way secured for the pirate-publisher a copy of the sonnets.

The last third of the book is devoted to miscellanea connected with Shakespeare such as his descendants, autographs and bibliography. Mr. Lee decides in favour of the spelling 'Shakespeare,' accepts as genuine the so-called Flower portrait (a photogravure of which is the frontispiece of the book), and pronounces the theory of the Baconian authorship of the plays 'absurd.'

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**SIR STAMFORD RAFFLES, ENGLAND IN THE FAR EAST**, by *Hugh Edward Egerton M. A.*, (*T. Fisher Unwin, London*).

This book is one of the "Heroes of Greater Britain" series, and as its title indicates sets forth the origins of the modern Straits Settlements. Of these by far the most important in population and trade is Singapore, and it is as the founder of Singapore that Raffles is best known. He began life as a clerk in the India House and was successively Assistant Secretary and Secretary to the Prince of Wales's Island Government, Agent to the Governor-General of India with the Malay States, Governor of Java and of Bencoolen, and again Agent to the Governor-General in a mission to the Far East. At first sight it may seem that the opportunities afforded by these posts were not great and that their holder's name, whatever local repute he might enjoy, would hardly bulk large in history. Raffles's chief claim to the grateful remembrance of mankind is that he opposed with equal courage and wisdom the purely commercial ideas of the Dutch and British East India Companies. These companies were eager to snatch the profits of power over the native inhabitants of Further India, but entirely unwilling to accept any responsibility for their material prosperity or moral elevation. The system of Government was, roughly speaking, to coerce the native rulers into forcing their people to cultivate pepper and to sell it to the company at a price below the cost of growing it. In return for this oppressive system of taxation, if it may be so called, the companies did practically nothing for the people. In Java, Raffles got into trouble with the Directors in establishing a system of land tenure and land revenue. Government lands were to be sold and to stimulate purchasers he became a buyer himself. His complete innocence was established but not before his imprudence had occasioned him much undeserved obloquy. It is striking testimony to the excellence of the administrative system he perfected in Java in the five years (1811-1815) for which the British held the island, that the Dutch to this day govern it on the lines he laid down. In Bencoolen he pursued a similar policy in similar circumstances. Here under our own East India Company the government was even worse than in Java. The Company held slaves and raised a revenue from the farming of cock-fighting and gambling licences. These abuses and the forced cultivation of pepper Raffles put down, and was told by the Governor-General that he had acted hastily.

To the East India Company in Raffles's time, the Far Eastern question seems to have been how to maintain trade and commerce with the Straits and

China without arousing Dutch hostility or accepting too much political responsibility. In furtherance of their view, Raffles was despatched on a roving commission through the peninsula and islands. The result, entirely unforeseen and indeed opposed by the Company, was the formation of a new settlement under treaty with the local Sultan on the island of Singapore. This was the culminating work of Raffles's official life. How he overcame the difficulties raised by circumstances and the opposition of his superiors, and with that careful forethought planned out the settlement may be read in Mr. Egerton's book.

Raffles was a man of science as well as an administrator and indeed it is in the former capacity that he was welcomed on his first visit home. He was a man of tireless energy, great amiability of character, fervent piety, and considerable intellectual power. These facts we learn from Mr. Egerton's book, but the present writer has failed to get from it anything more than the impression of an abstraction labelled Raffles. Mr. Egerton seems somehow to have fallen short of the presentation of Raffles the man, possibly because the book is overloaded with details of Straits Settlement politics, or possibly because Raffles did somewhat want that infusion of fallen human nature that is the biographer's best opportunity. Mr. Egerton is, however, fairly readable and since everybody ought to know more about Raffles than most people do, it is a pity he has not made the acquisition of the knowledge a little easier. Why also has he defaced an otherwise handsome volume with pen and ink sketch maps with illegible names and more than a suggestion of Punch's school-boy drawings?

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**SOME SOCIAL AND POLITICAL PIONEERS OF THE NINETEENTH CENTURY** by *Ramsden Balmforth*, (*Swan Sonnenschein & Co., London, Price 2/6.*)

This is a very inspiring book. It is a record of the good and noble work done by several Englishmen and women of the last century for the amelioration of the people. "Love great men; love, venerate, and bow down submission before them. Does not every true man feel that he is himself made higher by doing reverence to what is really above him?" Thus wrote the sage of Chelsea many years ago and we may quote them very appropriately with regard to this book. The social and political pioneers whose life and work are depicted in the pages of this volume are, among others, William Cobbett, Francis Place, Robert Owen, Lord Shaftesbury, Richard Cobden, John Stuart Mill, Charles Kingsley, Thomas Carlyle, John Ruskin, and William Morris. Those who wish to have an idea of the

many social and industrial movements of the nineteenth century will find this book very valuable. In this book an excellent and successful attempt has been made to produce a historico-biographical narrative. The chapters on Mill, Carlyle and Ruskin are particularly interesting. The pith of John Ruskin's economic message is brought out very well in the section headed "John Ruskin and the New Political Economy" from which we take the following:—

The new, or the true, Political Economy, then, has to do with the making, the gauging, the ordering, and the disposal of Wealth, or Life. It strives to do this, according to Mr Ruskin, with justice or such approximation to justice as the highest human wisdom can attain to, for justice, too, has its Divine Image or Ideal. But how is this justice to be obtained? And what are the principles which should determine its application? The answer of the old Political Economy was that justice will be obtained by free competition—the competition of men with each other. As Adam Smith put it, the selfishness of each would indirectly promote the welfare of all. But Mr. Ruskin is most severe in his condemnation of such a principle. Competition, he says—the competition, of the powerful against the weak, of the rich against the poor, of the talented against the natalented, of those who are born with great disadvantages—this will never produce justice. In a system of free competition, the unscrupulous, the unjust, will ever neutralise the efforts of the just, and their practices will tend to drag down the general standard of life to their own base level. There must be a higher law to which all must conform. Hence—"Government and Co-operation are, in all things, and eternally, the laws of Life. Anarchy and competition, eternally, in all things, the laws of Death." And again—in the preface to "Munera Pulveris" "It is not a law of Nature that wages are determined by competition. ....The fact which vulgar political economists have been weak enough to imagine a law, is only that, for the last twenty years, a number of very senseless persons have attempted to determine wages in that manner, and have, in a measure, succeeded in occasionally doing so." Wages, then which represent, or should represent, the just reward or payment for each individual's contribution to the national wealth, must be determined by some other method than competition. What is that method? Here Mr. Ruskin is not very definite, as, indeed, one could hardly expect him to be, seeing that the forms of social and industrial organisation which are to fit the higher morality must grow rather than be made. But he points out that the wages of our highest classes of workers—our statesmen, clergy, doctors, lawyers, and civil servants—are fixed in quite other manner than by competition—that is, either by Government, Municipalities, or public opinion working through certain forms of social organisation. Why should not the same principle be adopted for all classes of workers? The trade unions are already feeling their way towards a solution of the problem, and public opinion is coming to be recognised more and more as a factor in the settlement of industrial disputes—that is, virtually, in the regulation of wages and hours of labour.

And so we may arrive at a closer approximation to Ideal justice by laying down some such principle as this—That the reward of labour shall be determined, not by competition, but by the moral sense of the community, working through either the local or national Government, or

through such forms of industrial organisation as shall most readily adapt themselves to our moral and social needs.

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TALES OF INDIAN CHIVALRY.—by *Michael Macmillan, Principal of Elphinstone College, Bombay: (Blackie and Son, London. Price. 2/6.)*

Professor Macmillan deserves our thanks for writing these tales. To the Englishmen at home who have very hazy notions of the character and virtues of the Indian people, these tales will present a new and true view of Indian character. The tales, nine in number, are all based on historic incidents and they refer chiefly to Northern India. The majority of them deal with instances of Rajput heroism, especially of their women. The last tale entitled "The Lost Casket" deserves to be read carefully. It deals with the character of Sivaji and it represents him in his brighter aspects. The following passage will serve to bring out not only the "good" in Sivaji but serve also as a specimen of the easy and excellent style of Professor Macmillan:—

We had heard of the assassination of Afzul Khan by his own hand, and of the still more treacherous assassination of the Rajah of Jowlee, a Hindu like himself, whom he had done to death by the agency of others. My friend Mr. Smith, captured by the Mahattas at Surat, had told us how ruthlessly Shivaji had ordered the cutting off of the heads and hands of those brought before him. I therefore pictured him in my imagination as a man with the face of a Devil, surrounded by fierce followers with drawn swords ready to execute his cruel mandates and defend him against the just rage of his oppressed subjects. The real Shivaji pointed out to us by our Brahmin guide was very different from the creature of our imagination. He was seated on a stone bench by a well, with no escort near him, and was talking pleasantly with the women who came to draw water, and asking them kindly about their husbands and brothers. The children at the well came up to him fearlessly with smiling faces, and he was giving them fruit and sweets that he had brought with him for the purpose. As, ourselves, unscanned his features from our point of observation, we said to ourselves that we had never seen a face more expressive of kindness and more attractive. Whatever he might be to the foes of his nation and his religion, he was evidently the father of his people, and deserved their affection as fully as he had earned the fear and execration of their enemies. This new view of his character was abundantly confirmed during the rest of our stay at Raighur. Every Mawali and Hetkuri with whom we conversed spoke about him in terms expressive of mingled love and veneration as the saviour of the Marhatta nation and the pillar of the Hindu religion.

We commend these tales to the young and the old. The book is tastefully got up and has six fine illustrations.

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**KARMA : WORKS AND WISDOM. THE MEMORY OF PAST BIRTHS,** by Charles Johnston M. R. A. S. (*The Metaphysical Publishing Co., New York.*)

These two books from the pen of Charles Johnston embody the best that has been known and thought in the spiritual literature of the world on the subject of re-birth and the means of realising its truth. The doctrine of Karma has been traced through its various stages of development in the ritualistic portion of the Veda, the Upanishads, the Bhagavad Gita, the later Vedanta of Sankara Acharya, and the modern theosophical literature. The author contends that in the early Brahminical religion of ceremonies and sacrifices there is not even a shadow of the teaching of re-birth or re-incarnation and that the true apprehension of Karma as the reality of moral forces and re-birth as the necessary outcome of the persistence of these forces is the peculiar possession of the Kshatriyas. The early Brahminical teaching was a system of ritual, the rewards of which were the "feasts of this world and paradise" and the early Kshatriya teaching was an intuition of the potency of moral and spiritual forces as the determining powers of life and a belief in re-birth as the natural outcome of the reality and continuance of these forces. In the first place we cannot agree with Mr. Johnston that there is no trace of the doctrine of Karma or re-birth in the early Vedic hymns. In the 8th Ashtaka of the Rig Veda we find the following verse which clearly points to the existence of these doctrines in the Vedic times: "O, Asuniti, give us again our eyes, our life, and enjoyments in this world. Let us see the bright sun moving aloft, O Anumati; be gracious to us and bestow on us prosperity. Give us life again, give us earth again, give us *Antariksha* again, give us our bodies again nourished by the juice of *Soma*. O nourisher, let us walk in the right path." Again in the *Yajur-Veda*, we come across this significant verse:—"Let us again have our mind, let us again have our life-time, let us again have our life, let us again have our soul, again our eyes, again our ears." In the *Sathapatha Brahmana* the story of certain cannibals informing Bhrigu, the son of Varuna, that they were taking revenge upon those they ate for wrongs received in previous births also points to the antiquity of the doctrine of Karma and its prevalence in the early Vedic times.

Mr. Johnston speaks of the path of the fathers (*Pitriyana*) and the path of the Gods (*Devayana*), the former being the path of reincarnating souls, who go hence to the other world, the world of the reward of works, the latter being the path of just

souls made perfect, who reach liberation and become one with the Eternal. The Vedanta, however, teaches through its memorable Brahmin expounder Yajnavalkya that release from the miseries of life does not come either from works or wisdom but from knowledge (*Jnanan mo'kshah*). The path of the fathers and the path of the Gods apply only to a man who has desires. "But as to the man who does not desire, who, not desiring, is free from desires, is satisfied in his desires, desires the self only, his vital spirits do not depart elsewhere; being Brahman, he becomes Brahman." True liberation consists in one's recognising one's identity with Brahman as proclaimed in the sublime utterance of the Brahman sage Uddalaka—*Tat tvam asi*, That Thou Art. This is the highest teaching of the Upanishads and there is nothing to prove that it was the exclusive message of the Kshatriya sages. All the evidence on the other hand points to a contrary conclusion. We rather agree with the late Prof. Max Muller that "the speculations on the fate of the soul after death seem to have been peculiar to the royal families of India, while the Brahmins dwelt more on what may be called the shorter cut, a knowledge of Brahman as the true self. To know, with them, was to be, and after the dissolution of the body they looked forward to immediate emancipation, without any further wanderings." Barring the questionable dogmatism about the respective shares of the Brahmin, and the Kshatriya in the development of Hindu philosophy, we heartily endorse the views of Mr. Johnston as to the importance of the doctrine of Karma in the scheme of life, as to how it lightens the burden of death, dulls the edge of sorrow, and takes away the terror of separation. His explanation of the theory of re-birth and the description of the natural operations of the mind in the act of memory, and the methods suggested, with special references to the Upanishadic and Buddhist doctrines, for exercising the memory so as to bring within its field what lies back of the present consciousness are all exceedingly interesting and suggestive. The treatment of the subject, on the whole, is unique and admirable and deserves the careful study and attention of those who, engaged in the material and sensual pursuits of life, have entirely lost sight of the glory of the soul and its real destiny in the Great Beyond.

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**BUDDHA AND BUDDHISM.**—by Arthur Lillie. (*T. and T. Clark, Edinburgh.*)

This is an attempt to re-construct and re-interpret Buddhism from a somewhat novel standpoint. The learned researches of Oldenburg and Rhys Davids have familiarised us with certain aspects of

Buddhism which are intimately associated with nihilism and agnosticism of the most extreme type. Mr. Lillie contends with great ability and force of reasoning that these cold and unlovely aspects do not belong to original Buddhism and that they were engrafted upon it at a later age. He traces the religious condition of India at the date of Buddha's advent and points out that such an environment could not have possibly given birth to a nihilistic and agnostic system of belief, if evolution, not capricious originality, be the law of religious development. Though Buddhism seems a root and branch change, he attempts to show that it was only the lofty side of the old Brahmanism, purged of its ritualism and caste exclusiveness. A conversation between Buddha and some Brahmins reported in the *Teigga Sutta* is quoted to substantiate this position. When Buddha was dwelling at Manasakata in the mango grove, certain Brahmins learned in the three Vedas came to consult him on the question of union with the eternal Brahman. They asked him if they were in the right pathway towards that union. If Buddha were the uncompromising teacher of atheism that many folks picture him, he had at this point an admirable opportunity of urging his views. He would have said that Brahmins knew nothing about Brahma for the simple reason that no such being as Brahma exists. But this is exactly the line of argument that Buddha did not take. His argument was that the Brahmins knew nothing of Brahma, because Brahma is purely spiritual, and they are purely materialistic. Five veils, he said, hide Brahmins from mortal ken, the veil of lustful desire, the veil of malice, the veil of sloth and idleness, the veil of pride and self-righteousness and the veil of doubt, and only those who put off these veils can attain to a state of union with Brahma. Brahma is pure, sinless, free from malice, and self-contained, so that it is only the sinless, the pure in heart and the self-controlled that can hope to be in harmony with him. This teaching is certainly strange from a preacher of the gospel of nothingness and must make us think twice before we accept the now dominant and loudly proclaimed view of Buddha and his teaching. Asoka's inscriptions which are undoubtedly the first Buddhist teachings committed to writing, and the first authoritative Buddhist scriptures furnish strong confirmatory evidence for the view of Mr. Lillie. The first edict of Asoka says:—"Much longing after the things of this life is a disobedience, I again declare; not less so is the laborious ambition of dominion by a prince who would be a propitiator of Heaven. Confess and believe in God [Isana], who is the

worthy object of obedience. For equal to this belief, I declare unto you, you shall not find such a means of propitiating Heaven. Oh, strive ye to obtain this inestimable treasure." The following declarations are also found in other edicts:—"On the many beings over whom I rule, I confer happiness on this world; in the next they may obtain Swarga (paradise)." "I pray with every variety of prayer for those that differ with me in creed, that they, following after my example, may with me attain unto eternal salvation." "All the heroism that Piyadasi, the beloved of the Gods, has exhibited is in view of another life. Earthly glory brings little profit, but on the contrary, produces a loss of virtue. To toil for heaven is difficult to peasant and to prince, unless by a supreme effort he give up all." In the face of this unimpeachable testimony of the great philosopher king of Buddhism it is rash to dogmatise that early Buddhism rejected the belief in God, soul and future life. Mr. Lillie has raised an important question in the historical study of Buddhism and we trust that the line of argument so ably developed by him will be followed up by other orientalists. His book is a solid performance, showing much industry and scholarship, and his presentation of Buddha and his message of peace, charity and universal benevolence is both discriminating and sympathetic and deserves a hearty welcome.

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THE TAITTIRIYA UPANISHAD WITH COMMENTARIES, TRANSLATED INTO ENGLISH - by A. Mahadeva Sastri, B. A. — Book. II.

The volume before us maintains the high standard of its predecessors and has the additional value of dealing with some of the highest problems of the Vedantic metaphysics. While Sikshavalli mainly concerns itself with contemplation as a stepping-stone to Brahma Vidya, the Ananda-valli or Brahnavalli, the subject of the present volume, treats of Brahmavidya itself, and the numerous intricate problems connected with it. The students of the Vedanta are familiar with the view that Brahman is beyond the five Kosas or sheaths of the Self and it may interest them to know that this doctrine is the special feature of the Ananda-vall section of the Taittiriya Upanishad. As the translator points out, the doctrine of the Kosas is the pivotal doctrine of the Vedanta on its theoretical as well as its practical side, and nowhere in the Upanishads is this doctrine so thoroughly and exhaustively worked out as in the Upanishad translated in the volume under review. We therefore heartily recommend it to the lovers of the Vedanta and earnestly hope that Mr. Ma-

badeva Sastriar will be able to bring out the remaining parts of the work at an early date.

From Messrs. Bagster & Sons, Paternoster Row, London, we have the Sunday Book of Bible Stories, and Daily Light. The former consists of about fifty Bible narratives simply told and admirably illustrated by Mr. Birch, A.R.A. The latter contains a selection of verses from the Bible arranged for daily reading - one page for each day of the year.

The same publishers have sent us specimens of their Gem Oratorios. These are delightful little books, most convenient for singers or concert-goers, though perhaps the print is too small for use at the piano. The whole *Messiah*, printed clearly with words, full score and music, on good paper, in a volume that measures only 5 inches by 3½, for 6s., is a marvel of publishing. Mendelssohn's *Hymn of Praise* and *Hear My Prayer* are put together into one of these 'gem' volumes.

The "Calendar of Empire" by Mr. Ian Malcolm, M.P. (published by Messrs. Blackwood and Sons, London) is a very handsome book and a useful one. It may be accepted as a really interesting Calendar from a national point of view, seeing that it contains the names, words, and deeds that have gained glory for the British Empire. The selections are instructive and no one will deny that Mr. Malcolm has made an earnest attempt.

#### Books Received.

- F. FISHER UNWIN, LONDON:—  
 The Mind of the Century ... 1/  
 Mother Baby and Nursery: ...  
 Driscoll, King of Scouts, by A. G. Hales ...  
 The Sea by Louis Becke ...
- BLACKIE AND SON, LIMITED, LONDON:—  
 Readings from Carlyle, ...
- GEORGE BELL AND SONS, LONDON:—  
 A Cabinet Secret, by Guy Boothby ...  
 Brought to Bay, by Richard Henry Savage ...
- OFFICES OF THE SANITARY INSTITUTE:—  
 The Journal of the Sanitary Institute, 1900 ...
- MAC MILLAN & CO.:—  
 A 1st English Primer by Kalipada Banerji, 2 as.  
 A 2nd Do do, 3 as.
- G. T. A. PRINTING WORKS, MYSORE:—  
 Taittiriya Upanishad with Commentaries, Translated into English by A. Mahadeva Sastriar, Rs. 2
- S. P. C. K., MADRAS:—  
 Essays on Islam, by the Rev. E. Sell, B.D.
- OXFORD UNIVERSITY PRESS WAREHOUSE:—  
 Speeches of Cromwell 1644-1658, Edited by Charles L. Stainer, M.A. ...
- DAWBARN AND WARD, LIMITED:—  
 Woven Fabrics, (Useful arts series) ...

## Topics from Periodicals.

### THE NIRVANA.

The *Humanitarian* for March contains an extremely interesting article by Leon de Rosny on the *Nirvana*, the supreme end of created beings according to Buddhism. The etymological analysis of the word *Nirvana* leads us to the conclusion adopted by Eugene Burnouf, the illustrious founder of these studies in France, and followed by Barthélemy, Saint Hilaire, *viz.*, that the supreme end of the Buddhists consists solely and simply in the absolute annihilation of individuality. But Leon de Rosny maintains that etymological research does the greatest injury to the study of religions by lowering the standpoint of the latter in the most lamentable way and endeavours to establish that the *Nirvana* is not the final destruction of individuality but the return to God, after complete emancipation, by the beings who had their origin in Him. In his opinion, the *Nirvana* represents the Great All, whence have issued all the germs of being, and into which these germs, after being developed, ripened, and sanctified by love and work, are summoned to return, as soon as they are freed from the pernicious illusion of the *Ego* or *A'tman*; or, in other words, as soon as the spirit which rules them has won complete victory over matter. To substantiate his position, he relies mainly on two classes of evidence. In the first place he takes his stand on the opinion of the Orientals themselves upon the point, referring to original texts and especially to works not yet translated into any European language. He then tries to prove that the interpretation of the *Nirvana* as "nothingness" is absolutely incompatible with the body of Buddhist doctrine. If we examine the interpretations of this vital clause of their religious belief by the different peoples of Asia who have been converted to Buddhism, we find that they, one and all, intend by the term *Nirvana* something entirely opposite of extinction. The Buddhists of Tibet mean by it "deliverance from misery"; the Mongols, "the escape from misery"; the Chinese "to separate oneself from, or to escape, both life and destruction," "perfect and absolute purity," "to obtain deliverance from trouble and suffering," "complete extinction of the animal essence"; the Siamese, "the sole eternal abode, of happiness in a subjective existence." The famous Buddhaghosa whose writings, composed in the fifth century of the Christian era, are held to contain the tradition of the Buddhist church of the south, says that the *Nirvana* is "the highest sum of happiness." The *Dhammapada*

calls the *Nirvana* "the highest beatitude," "the port beyond the ocean of pain," "the place of repose and bliss, where embodiments cease," "the city reached by path of universal knowledge, blessedness and peace." These authorities clearly prove that the *Nirvana* is not annihilation but a state of unspeakable happiness and complete calm, free from all material conditions and clogs, and attained as the reward of long existences of sacrifice and abnegation. The fact that the Buddhas, after having the *Nirvana*, are able to re-appear again on earth to assist in the religious instruction of mankind, without being obliged to re-enter the chain of transmigrations, and can return, after the accomplishment of this mission, to the *Nirvana*, confirms the above interpretation. Leon de Rosny also quotes the opinions of certain enlightened Buddhists from Siam and Japan in support of his somewhat deistic and spiritualistic conception of the *Nirvana*.

#### HAIDAR'S ANCESTRY

Is the subject of a readable contribution by C. H. to the *Madras Review* for the current quarter. The article begins with an interesting descriptive sketch thus :

"In modern times Kolar is the Klondyke of India - at least its coolly Klondyke. As the earliest and the most well-known seat of the mining industry it has attracted the attention of the ignorant, every day Railway passenger and the intelligent though casual globe-trotter. It has drawn the requisite amount of labour from all parts of South India. The coolies.....piling into the Bowringpet Station platform to run down to the various Mining Stations is indeed a sight to see. The jet black but well-knit Pariah, the slim but iron framed Mahomedan, the undaunted, but open-hearted Malayali, the wiry but strong Naidu, the gentlemanly but self-assertive Mudaliar, the fatty but cunning Komati, may even the keen-witted but speculative Brahman have all made their way to the place which in one panoramic view exhibits many of the South Indian castes and tribes and is a witness to the practical headed European's enormous conquest over nature."

After stating the current Koreish origin of Haidar's ancestors says that writer :-

"The theory of the Koreish origin seems to be based upon grounds the most flimsy. Of the many inherent improbabilities in it the first seems to be the one regarding the immigration of Fattch's father and uncle into the south. At the time of their alleged advent, Arungzeb had died, the puppet emperors that succeeded him had begun ascending the tottering Moghal musnad, the disruption of the Moghal Empire was staring, and the general dislocation of society in Hindustan had commenced. In such a state of ferment every adventurer of fiery spirit and valour made a fortune for himself in India by either setting up a principality for himself on the ruins of the old Moghal possessions or serving for or against the Moghal Emperor as a Military Commander. Under such circumstances it is quite past understanding

to the present writer why Haidar's alleged ancestors should not have thought of securing positions of honour and trust in Hindustan, but have pitched upon the rather queer course of coming down south for their livelihood in the rather humble position, to put it in the least offensive way, of revenue peons. Again, if really they belonged to such august parentage, they would really have been treated with marked respect with the result that they would either have risen to be the spiritual guides of the local Mahomedans or have become military officers of rank and consequence under the local Governments. Indeed, it strikes one that they were more fit for military work than for revenue work in the position of peons."

Another objection is found in the ill-reception of Fattch's mother-in-law at Arcot, on account of her connection with him. The family into which she expected to marry her other daughter declined the alliance for the same cause. This, the writer says

"seems to indicate that Fattch seems to have belonged to a comparatively lower order of Mahomedans than the Mahomedan lady whose cause he espoused. If really Fattch belonged to the Koreish tribe then the Nayvet lady could not with justification, have been ill-received at Arcot and he refused the alliance already agreed upon."

Continuing, he says that

"the alleged Koreish descent perhaps was first invented to make the marriage of Fattch Naik with the Nayvet ladies look as if it were one contracted on terms of equal descent and subsequently to answer the purposes of the high regal position of his still greater son Haidar Ali."

He derives a third objection against the theory of Koreish descent in the fact that Haidar's own account of his Bijapur origin is in direct conflict with it.

"It is certain that, if the alleged account be true Haidar himself would have claimed and preferred the Koreish descent to the Bijapur one. But as a matter of fact there is no record of his having done either of these. On the other hand it may be pointed out that even his claim had no true foundation to rest upon. He claimed Bijapur descent for the simple reason that he wanted to rest his usurpation of the Mysore Rajah (? Raj) upon a foundation of right. For Mysore was tributary to Bijapur. And the fact that it depends only upon his own assertion and is not referred to even by the best of his biographers, Husseinalikhan Kirmani, make us receive it with great caution if not with positive suspicion. The fact seems to be that as Lewin Bowring who also shows his disbelief in the august descent of Haidar's ancestors, remarks, "in Hindustan, as elsewhere, when any man of vigour and energy has raised himself to a throne, it is not difficult to find for him a pedigree showing his noble descent, and it is not therefore surprising that native annalists should endeavour to prove that Haidar came from the famous race of Koreish."

Thus discrediting both the Koreish and the Bijapur descents of Haidar and his ancestors and incidentally giving a description of the mausoleum of Haidar's ancestors and relatives at Kolar, the writer suggestively concludes thus :-

"Complying with what has been already said the fact that the title of "Naik" was bestowed on Fattah, a title which, if he had the reputation to belong to such noble parentage, would not have been bestowed upon him, and even if bestowed he would not, in propriety, have accepted it so calmly and quietly as he in fact seems to have done, we may infer that Haidar's ancestors seem to have belonged to locally evolved Mahomedan family at Kolar- to which must belong the credit of having produced "one of the most remarkable personages who have played their parts on the stage of Indian History"—without accepting Col. Miles' suggestion, on what appears to be insufficient evidence that they might belong to a family of Hindū converts to Mahomedanism, who often call themselves Korish, though it might have the merit of explaining as well Haidar's indulgent policy towards Hindus and Tippu's fanatic outbreaks against them. At any rate the attributing of a noble pedigree is not necessary to raise Haidar in our general estimate of his character and greatness."

#### MRS. BESANT ON IDOLATRY.

A series of articles entitled "In Defence of Hinduism" is begun by Mrs. Annie Besant in the March number of the *Central Hindu College Magazine*, a journal for Hindu boys, conducted at Benares by that remarkable English lady. The following on "Idolatry" is the subject of the first paper:—

"In all ages of the world, among all peoples, from the savage to the most highly civilised, images have been used in religious worship, and among the latter as a help in meditation. From local and temporary causes this use has been thrown aside by small minorities, but even then in appearance rather than in reality. Thus for about three and a half centuries a small minority of Christians, a section of Protestants, have discarded the use of images; but this is a mere temporary reaction from the superstitions which had grown up in connection with their use. So also the Jews threw aside their use, as a reaction against the ignorant idol worship in surrounding tribes. The Muslims, again, were taught not to use them, in order to break them away from the dark idol worship prevailing amid the surrounding of their great Prophet. And in later days certain Hindu sects—such as the Sikhs, the Arya Samaj, the Brahmo Samaj—have cast aside the use of images in reaction from superstitious forms of idol worship in India.

It is instructive to notice how the ineradicable tendency to their use has re-appeared in these very bodies. The Jew had his Ark, the Musselman has his Kaaba, the Sikh has his Ganthia, and in the few cases in which a material idol has not re-appeared, a mental one takes its place, as we shall presently see.

Now wherever a practice is found thus universal and persistent, we may be sure that some fact in nature is its root, and that it should be understood, and purified if necessary, not destroyed. In fact, it cannot be destroyed, and, if its form be shattered, it takes to itself a new one.

The fact at the root of idolatry is that the limited mind of man cannot grasp, cannot understand, the unlimited Brahman, the one Infinite Existence. That can only be described by negations—"Not this, not this." The Nirguna Brahman—Brahman without attributes—cannot be thought, nor loved, nor worshipped. The Saguna Brahman—Brahman with attributes—*Ishvara*—He can be

thought, loved, worshipped. Through His attributes we can reach Him, touch Him, feel Him; to Him our aspirations can rise, our hearts can lie at His Feet. Now an idol is an image which shows symbolically some attribute, or group of attributes of the Supreme, some Person in whom His attributes are seen. Thus an idol of Vishnu is blue, the colour of the over-arching sky, has four arms, one for each quarter of space, bears the conch for creative sound, the mace for sovereignty, the *chakra* for energy, the lotus for spirit and matter, and so on. These great symbolic forms are seen in the higher worlds, and sages, who have seen them there, shape their likeness down here to remind people of the Divine powers and attributes.

Or the idol may be an image of a Divine man such as Shri Rama or Shri Krishna, or of a Being such as Ganeshti, or Durga or Lakshmi. In every case, the particular Being is worshipped as a manifestation of the Supreme, One in whom His greatness is specially manifested, but whose human form manifests Him in a way to which the heart can cling.

Another fact on which idolatry is based is that God is the one Life, the only Life, He is everywhere and in everything, and therefore can be worshipped in anything. A tree, a stone, may serve as a physical representative of God. If a man worship a tree or a stone, as itself, he is ignorant; if he worships God in the tree or stone, he is wise and worships rightly. It is idolatry in the bad sense to worship a form instead of the indwelling Life; it is idolatry in the good sense to worship God in everything, and love Him in all objects.

After all, when we worship God, or meditate Him, we form a mental conception of Him; we think of Him as Creator, Ruler, Father, Guardian, Justice, Power, Love. But this means forming a mental image of Him, a mental idol. Without *some* conception we cannot worship, nor even think of Him. And surely none can pretend that his conception embodies more than a fragment of the Divine Nature. But these mental idols are often more dangerous than the physical, for no man can confound the physical image with God, whereas many do dimly fancy that their mental conception of God is God.

Here is an instructive (and true) little story. A Yogi sat in a temple worshipping; a missionary put in his head and said: "What are you doing?" "I worship God," was the gentle answer. "You should worship *my* God," said the missionary. "Are there then two Gods?" said the Yogi. And the missionary went away abashed.

In meditation, an idol forms a point on which the mind can be concentrated; after a few moments of steady gazing, the eyes should be closed, and the image reproduced by the mind, and the attention fastened to it. As the mind grows steady, the form disappears and the indwelling life pervades the consciousness, filling it with life and joy.

A further use of an idol is that it forms a magnetic centre. A highly evolved person can draw down on an image some of the magnetism of the Being it represents, and worship and meditation are much facilitated by the presence of such an image. The pure and soothing magnetism spreads around it, creating a most helpful atmosphere, so that the mind grows calm and steady with very little effort. And yet again—such a prepared centre is very readily strengthened and revived by the Being whose magnetism already is present there, and the prayer or meditation of the Bhakta drawing His attention. He sends an answering current through the centre already made.

Any one who has studied magnetism according to the European methods will at once see this aspect of an idol



and will recognise the scientific wisdom of the eastern sages in sanctioning the use of images

Rash and unwise are they who throw away the helps provided to aid the soul in its upward struggle, and would force upon all a single way of seeking the Supreme Self. The path of Bhakti is the one that many feet find the easiest to tread, and on this the use of images has ever been found a necessity in some stages.

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#### DYING SPEECHES OF THE NINETEENTH CENTURY.

Time that "gathers all mortals with cold immortal hands" has heaped with dust much of the work of the small number of men of "strong character and striking views" who guided the intellectual learnings of the great masses of thinking people during the last half century. These men influenced the studies of many thousands, they had a following and they created new schools of thought. We are indebted to the *Canadian Magazine* for February for a collection of the dying speeches and confessions of some of them—a perusal of which may refresh the memory of some and serve as a warning to others. Few men had so much influence over a large part of the educated public as John Stuart Mill. He also exercised his logical faculty in undermining the popular belief in revealed Christianity. On the subject of public affairs, his message was :—

"In England I had seen and continued to see many of the opinions of my youth obtain general recognition and many of the reforms in institutions, for which I had through life contended, either effected or in course of being so. But these changes had been attended with much less benefit to human well-being than I should formerly have anticipated, because they had produced very little improvement in that which all real amelioration in the lot of mankind depends on, their intellectual and moral state; and it might even be questioned if the various causes of deterioration which had been at work in the meantime had not more than counterbalanced the tendency to improvement."

This is a melancholy confession and what Mill has to say of graver affairs than political reforms is equally melancholy though sincere :—

"I am now convinced that no great improvements in the lot of mankind are possible until a great change takes place in the fundamental constitution of their modes of thought. The old opinions in religion, morals, and politics are so much discredited in the more intellectual minds as to have lost the greater part of their efficacy for good while they have still life enough in them to be a powerful obstacle to the growing up of any better opinion on those subjects."

Another of the band of distinguished men was Prof. Tyndall who inculcated purely materialistic views of life. His last message was in the Belfast Address in 1874. He says :—

"I thought you ought to know," he said, "the environment which, with or without your consent, is rapidly surrounding you and in relation to which some adjustment on your part may be necessary."

This environment consists, to all appearance, in the first place of a claim on the part of science to supreme authority. Mark what follows :—

"The impregnable position of science may be described in a few words. We claim, and we shall wrest from theology, the entire domain of cosmological theory. All schemes and systems, which thus infringe upon the domain of science, must, in so far as they do this, submit to its control and relinquish all thought of controlling it. Acting otherwise proved disastrous in the past, and it is simply fatuous to-day."

Here is the last dying speech of Mathew Arnold :—

"More and more mankind will discover that we have to turn to poetry to interpret life for us, to console us, to sustain us. Without poetry our science will appear incomplete; and most of what now passes with us for religion and philosophy will be replaced by poetry. Science, I say, will appear incomplete without it. For finely and truly does Wordsworth call poetry 'the impassioned expression which is in the countenance of all science;' and what is a countenance without its expression? Again, Wordsworth finely and truly calls poetry, 'the breath and finer spirit of all knowledge;' our religion parading evidences such as those on which the popular mind relies now; our philosophy, pluming itself on its reasonings about causation and finite and infinite being; what are they but the shadows and dreams and false shows of knowledge! The day will come when we shall wonder at ourselves for having trusted to them, for having taken them seriously; and the more we perceive their hollowness the more we shall prize 'the breath and finer spirit of knowledge' offered to us by poetry."

And what is the last message that Mr. Herbert Spencer has to leave to his followers? Like that of Arnold, it will be seen, his object is to console us by means of, not poetry, but science :—

Those who think that science is dissipating religious beliefs and sentiments seem unaware that whatever of mystery is taken from the old interpretation is added to the new. Or, rather, we may say that transference from the one to the other is accompanied by increase. Since for an explanation which has a seeming feasibility, science substitutes an explanation which, carrying us back only a certain distance, there leaves us in the presence of the avowedly inexplicable."

So scientific reasoning is a mystery in itself: Mr. Spencer concludes the message :—

But one truth must grow ever clearer—the truth that there is an inscrutable existence everywhere manifested to which he can neither find nor conceive either beginning or end. Amid the mysteries which become more mysterious the more they are thought about, there will remain the one absolute certainty, that he is ever in presence of an Infinite and Eternal Energy from which all things proceed.

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#### SCIENCE AND RELIGION.

The place of honor in the March number of the *Arena* is given to a paper by James T. Bixby who, in all seriousness, raises and argues the question if science has ever been a source of harm or danger to religion. He argues strongly to convince us that the study of science "has not only

immensely increased our reverence and awe before the majesty of God's works; it has purified faith and strengthened trust" and without science to correct and guide it "religion is constantly going astray." Whatever injuries faith may have received from modern science they are more than counterbalanced by the assistance science has given:—

If with ruthless hand she has battered down baseless traditions, science consecrates with religious veneration the simplest real fact. The widening of the circle of the unknown has only served to confront us with deeper and more awe-inspiring mysteries. If science has expelled, from the realm of belief, witch and elf and demon, depopulated the supernatural world of a great host of uncanny creatures, and even ostracized the old-time interventions of capricious divinities, it is to give us in their place an unswerving system of constant order, luminous with beautiful necessities and rosy with the pulsing heart's blood of universal love. If science has disabused our thoughts of the idea of a fallen mankind and a ruined world, it has given us the more cheerful faith in a steadily rising world, an ascending humanity, and a progressive society, whose epic is the gradual up-climbing of man from his primeval cave-dwellings to the civilization and refinements of to-day. If modern inquiry has made obsolete much or most of the subtle arguments from design for the Divine existence that Bell and Paley once accumulated, it has given us in its place a wider and profounder theology—that which rests on the unity of plan that must result from unity of force and law, made one in mind; and it forces on us with renewed cogency the incredibility that all the varied influences of the world should conspire, as they have, to develop so splendid a cosmos out of chaos, and such harmoniously adjusted and admirably perfected fauna and flora out of the primitive protoplasmic sameness, unless there were a rational will and purpose working within it all to guide it steadily in its continuous upward path.

It is apt to be those most ignorant of modern investigations and most unfitted to discern their bearing that are filled with unspiritual crudities. And the scientists who have adopted antitheistic or materialistic views have mostly been specialists concerned with the surface details of some single science. But those who have gone deeper into science like

Jevons, Clerk Maxwell, Thompson, Tait, or John Fiske—have almost all of them recognized the great spiritual realities, because as they went profoundly into the philosophy of science they quickly found themselves confronted with those same mysterious forces and problems, inexplicable on mere physical grounds, which religion finds. As Lotze, the great scientific philosopher of Germany, was so fond of saying, we should recognize at once "how absolutely universal is the extent of the rôle which mechanism has to play in the structure of the world, but how entirely subordinate is its significance."

The best remedy, therefore, for the dangerous influences experienced or feared from the new knowledge of nature everywhere spreading to-day is not "less science" but it is "more and deeper science." A correct knowledge of the great forces of nature cannot be prejudicial to science. Mr. Bixby quotes Prof. Tait and Prof. Henry Drum-

mond to support the fact that the leading men of science in this age have for the most part believed in Divine revelation. What has suffered by the progress of science has "usually been simply the outgrown science of former generations which to save itself from criticism has bolstered itself upon scripture texts or it is the obsolete metaphysics and traditional dogmas which have audaciously assumed that they and they alone constituted religious faith, that have cried out in painful discomfiture." For what, after all, are the investigations of science in the light of the dictates of religion?—

Recognizing, as Religion does, the whole Universe as the embodiment and manifestation of the Creator, the Church ought always to encourage rather than discourage the fuller knowledge of this embodiment and manifestation; for, to the consistent worshipper of the one and only God, Nature is his oldest Testament and his most direct Scripture; the ideas disclosed in it are God's thoughts; the laws of force and matter found there are God's plans materialised; and natural history is but a chapter of natural theology. And the finding of a new manuscript of the Bible or hitherto unknown sayings of Jesus should not rejoice the Church more than the discovery of a new law of Nature.

A little knowledge inclineth men to atheism but deeper learning bringeth them back to religion.

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#### SIAM, THE LAND OF THE FREE.

Siam is a comparatively modern country and though its political importance to England is very great, not much is known about the details of that State. The March number of the *Humanitarian* contains an interview with the Siamese Minister in the course of which His Excellency gives some interesting information about the administration of that country. As many other countries, Siam is, evidently, becoming rapidly westernised. His Majesty King Chulalongkorn is an absolute monarch assisted by a Legislative and Privy Council whose powers are considerable. Each province is governed by a Royal Commissioner appointed by the king. Of late a tendency towards centralization has become very marked and the Siamese minister does not hesitate to say that this is for the country's good. One of his acts for the civilization of his country was the abolition of slavery. Education is compulsory. There are elementary schools and a fair number of secondary schools, but no universities. There are educational institutes to prepare for the civil service, the legal and military and other professions. The industries of the country, says the minister, are still in an undeveloped condition. There are in Siam valuable mines and forests which, it is hoped, will yield a rich harvest in the near future. In the meanwhile it is well known, that among Siamese there are skilled potters, very clever enamellers

and jewellers. The minister assures us that, when the country is once fully opened up for trade, Siam "shall astonish the world." He is sure that the religion of the State is the purest form of Buddhism. "Every man in Siam becomes a priest for a short time, after which he returns to the world and resumes his ordinary vocation." Speaking of religion in Siam may naturally remind one of its well-known emblem of national and religious significance—we refer to the white elephant—the capture of one of which is considered an omen of happy augury.

"We do not worship him," says the minister, "we venerate him, because we believe it be the form chosen by the Buddha for his future incarnation." The estimate in which women are held in any given country is generally taken as the barometer to gauge the state of civilization that country has reached. Admitting this test to be all sound, Siam must be regarded as a very civilized land, the women enjoying, the minister affirms, "as much freedom as their European sisters."

In their infancy and early youth they are at home, and under their mother's supervision, are taught cookery, sewing, and the virtues of the domestic life. They are also taught sundry charming accomplishments. Nor is their religious training neglected, for the duty of almsgiving is duly impressed upon them. For a girl of the higher classes there exist excellent schools. Siamese girls are, as a rule, very quick, and, like their brothers, have great facility for learning languages. Marriages are generally arranged by a "Go-between," an aged female friend who undertakes the delicate mission of sounding the parents and conducting the necessary negotiations. Many of the marriages are love matches as with you; others are just "marriages de convenance."

No wonder, then, that Siamese women make excellent house-keepers and mothers.

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#### HALF A CENTURY'S PROGRESS.

Mr. Reade devotes his second paper on this subject, in the *Canadian Magazine*, to a retrospect of the developments of the world's thought and action in various directions and a general indication of those events which have caused alterations in the political maps of both hemispheres. The most striking has been the achievement of science (1) as it is related to science and men of science only; (2) as it implies some real improvement to one or other of the arts of life; and (3) as it modifies the outlook of popular theology and, perhaps, necessitates a new basis for ethics, law and the authority of ordered society. The theory of evolution of Darwin has given fresh stimulus not only to scientific workers but to theologians, professional men, artists, men of letters, economists and the toilers in the whole field of human endeavour. The new chemistry, the new astronomy, biology, physiology, human and compara-

tive; geology, palæontology and, as instruments of research, the spectroscope, photography and electricity—these and more have ripened for man's use. In medicine and surgery signal have been the gains, especially in the use of anaesthetics. The use of X-rays to discover bullets and other substances lodged in the body is the latest instance of research. Passing on to the trend of literary advancement, we see that the number of publications issued yearly from the press has become enormous. The flood of fiction has grown considerably in volume. And the improved means of land and ocean travel, correspondence and telegraphic communication have made the comparative method of studying literature possible. No less remarkable is the industrial feature of our time. New inventions have necessitated fresh division and created new occupations. The sub-division of labour and the specialization of skill in every class of work done mainly by machinery make co-operation essential to production. After this retrospect of the progress of religion, science and art, invention and industry, to draw men together, levelling the barriers that make them strangers, Mr. Reade naturally proceeds to consider the question "What is it that still makes men enemies eager to rush madly at each other's throats?; that makes the forecasts of peace indulged in fifty years ago, fallacious?" The Geneva Convention, the St. Petersburg Declaration, the Brussels Conference and the Hague Conference have produced considerable moral effect, though international irritation has not been entirely removed. The wars of the last fifty years have wrought revolutionary political changes in England. The German Emperor, the King of Italy, the Emperor King of Austria-Hungary, the King of Serbia, of Roumania, the prince of Bulgaria, these names indicate some of the main features of the reconstruction. Exploration and colonisation have transformed Africa. What is known as the partition of Africa has been devised during the last fifteen years on the basis of the Berlin Conference of 1885. Borneo, New Guinea, Madagascar, Tapti, Fiji, Hawaii, Samoa, Porto Rico, Cuba, the Philippines have undergone changes of ownership materially affecting their destinies. In the New World the three main continental countries of North America have been in many ways transformed, partly owing to peace and partly owing to war. The Venezuela—Guiana boundary question was settled by arbitration. Alaska passed by purchase from Russia to the United States. Indeed, in many ways the contrast between the Geography of 1850 and that of 1900 is far-reaching and the present forecasts of peace cannot be regarded as discouraging.

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## DEPARTMENTAL NOTES.

## Educational.

(By a Head Master.)

## MADRAS CONVOCATION ADDRESS.

The odds are against the person who has to give the yearly advice to graduates. To the older part of the audience it is all stale as copy-book maxims. Be good men, advance sound learning, continue your study, cultivate a hobby, avoid Government service, despise mere wealth, uphold the honour of the University: Oh yes! one knows it too well. And when a boy is well ahead of his class, he must yawn, while the poor master is breaking the heads of the dunces and his own. To arrest attention, the speaker must be gifted with great literary and elocutionary powers. He must have a reputation and a striking personality. He must put forth every now and then a fine phrase, a striking parallel, a quaint conceit, or a brilliant suggestion. But after so many decades of learning and authorship it is not easy to turn out literary *bonmots*.

Mr. Justice Shephard had one advantage: expectation was not high. But he fell below it. Nobody expected the theatrical display of W. H. H., the practical wisdom of Sir Madhava Rao, the finished culture of Sir Grant Duff, or even the conscious elegance of Ranganatha Mudaliar. But one who has been for so many years a member of the Syndicate might have afforded some clue to the mystery that shrouds the operations of that body, or some hint about the impression that has been made on it by the cry of University reform. Having dealt for such a long time with curricula and boards of study and text books, he might have made some useful suggestions for improving the methods and raising the aims of college work. On the subject of examinations and examination scandals again, the public had almost a right to the benefit of the Vice-chancellor's long experience. But it was not to be.

## FEMALE EDUCATION.

After paying a high compliment to the first lady M. A. of the University, Mr. Shephard bemoaned the standstill at which female education seems to have arrived just now. This, however, is not confined to Madras. Everywhere in India, the Director or the Inspector-General of Education has the same complaint to make. The causes mentioned are two: i. the want of qualified caste women teachers, ii. the indifference of the community. Indifference indeed! What whip of scorn can call forth a feeling in us?

What voice of exhortation pierce our dull ear? What visions of glory open our eye, and make us stretch forth a hand? Not so long ago, after the death of the Maharaja of Vizianagram, a mighty fuss was made at the residence of the most influential native gentleman of Madras for carrying on His Highness's Girls Schools—and what came of it? Æsop's mountain at least brought forth a small rodent.

## VAKILS! LEARN ENGLISH.

The advice to Vakils to perfect their mastery of the English language raises the question:—Is the working knowledge of English possessed by the Indian of to-day better or worse than that of his father or uncle of the past generation? No full discussion is possible in these notes; but it can be affirmed with confidence that in point of pronunciation and of fluent and easily understood expression, if not of graceful or artistic composition, the present generation compares favourably with the past. Still a great deal remains to be done. In schools particularly, teachers have not merely to teach, but themselves in great measure to learn, good English composition. In fact the advice to Vakils is equally appropriate to all classes of educated men; and though the retort is cheap and has been actually indulged in, that the average Englishman is also sometimes slipshod in writing, and awkward in speaking, we shall gain rather than lose to listen to the rebuke and profit by it. To the schoolmaster it ought to be a trumpet call to improve himself and his pupils; to the Wakil and others to keep up their acquaintance with the wells of true English and keep watch over their own modes of thought and expression.

## ADVANCED POST GRADUATE WORK.

The want of provision in Madras for research work by graduates has long been lamented. Private benefactions being out of the question, various plans have been proposed. Has not Mr. Shephard heard of a proposal to devote the surplus of the University coffers to this purpose? Cannot the University add to the fund, if so appropriated, out of its annual boardings? And yet like the householder who shows a hungry guest his neighbour's door the Vice-chancellor pointed his finger at the lakh or so spent by Government in the maintenance and support of the few colleges in the Presidency. True, the proposal takes the form of a modest timorous query; but anything in the nature of a change in the policy of the Education Commission should be ventured only after careful consideration of all the issues involved. As it is, it smacks too much of the amateur who lightly drops a suggestion along with the ashes of his cigar.

## SOME PUBLICATIONS.

We have received from Blackie and Son a book for class-reading consisting of 'Passages from Modern Authors.' The selections are varied and interesting, and include extracts from Bryce's Impressions of South Africa, Major Younghusband's narrative of the Chitral campaign, and Sir Robert Ball's fascinating book on Astronomy. The notes are few and choice, and accompanied by hints on word formation and derivation.

The Palmerston Readers, Books I—V, are a handsome series. We find good illustrations in each volume and a few coloured plates also. Some hints on grammar conclude each book and in the higher ones there are a few notes as well.

'A New Sequel to Euclid,' also of Blackie and Son, by W. J. Dilworth is in three parts, and consists of a series of model exercises and examples. We have no doubt it will be of great help to the intelligent teacher of geometry in our schools and colleges.

## A UNIVERSITY FOR WOMEN.

Japan still occidentalizes. It is stated that the rich family of Mitsui of Tokio has offered an extensive site in that city for the erection of a University for women, and three other citizens have between them contributed a sum of £24,000 for the cost of the necessary buildings. The work is already in progress, and it is hoped that the new University will soon be opened. It is not likely that there will be any want of students, as in recent years very many young ladies of good family have applied to be admitted to the University courses, especially to the Faculty of Medicine and the Polytechnic school. The latter institution is intended for the training of civil engineers, a circumstance which seems to show that Japan is about to set an example to Europe in opening up a new sphere of labour for the woman of the future.

## A GOOD EXPERIMENT.

The School Board for London propose to try a new experiment in the teaching of history. Following the example of Germany and other continental countries, it is intended to proceed "from the known to the unknown," and connect the story of the past with the actual local life of the present. The scheme under consideration is to provide, for the higher standard children attending their schools, lectures on the history of the various London boroughs, with lantern-slide illustrations, in the London town halls. The school Board hope that the town halls will be lent free for the purpose, and in such cases they will supply a lecturer and illustrative slides. The Board of Education have expressed their willing-

ness to recognise the attendance of scholars in the higher standard at occasional lectures of the kind proposed, subject to the approval of the special arrangements in each case by H. M. Inspector.

## Legal.

By A High Court Vakil.

## AFFIDAVITS IN COURT.

The expression "*that there may be truth even in an affidavit*" has become proverbial. It is not unusual to make all kinds of allegations in affidavits. There is no chance of the deponent being cross-examined upon the allegation; and it is seldom that the maker of an affidavit is directed to be prosecuted. Moreover, many a litigant is shrewd enough to make suggestions "on information and belief" for which he cannot be arraigned before a Magistrate. We are glad that the Lord Chief Justice of England and Lord Justices Rigby and Vaughan Williams, have protested against the practice, and we hope that the expressions of opinion from such eminent Judges will be acted upon by all the courts in this country. This is what Lord Justice Rigby says (2 Chancery 1900) 753 at 754 and 755.

*Rigby L. J.*,—"In the present day, in utter defiance of the order (Rules of the Supreme Court, 1883, order XXXVIII., 3)(1), Solicitors have got into a practice of filing affidavits in which the deponent speaks not only of what he knows but also of what he believes, without giving the slightest intimation with regard to what his belief is founded on. Or he says, "I am informed," without giving the slightest intimation where he has got his information. Now, every affidavit of that kind is utterly irregular, and in my opinion, the only way to bring about a change in that irregular practice is for the Judge, in every case of the kind, to give a direction that the costs of the affidavit, so far as it relates to matters of mere information or belief, shall be paid by the person responsible for the affidavit. At any rate, speaking for myself, I should be ready to give such a direction in any such case. The point is a very important one indeed. I frequently find affidavits stuffed with irregular matter of this sort. I have protested against the practice again and again, but no alteration takes place. The truth is that the drawer of the affidavit thinks he can obtain some improper advantage by putting in a statement on information and belief, and he rests his case upon that. I never pay the slightest attention myself to affidavits of that kind, whether they be used on interlocutory applications or of final ones, because the rule is perfectly general that, when a deponent makes a statement on his information and belief, he must state the ground of that information and belief.

*Vaughan Williams L. J.*,—"With regard to affidavits of the sort before us, it is not quite a sufficient or satisfactory remedy to throw upon the party upon whose behalf such affidavits are put forward the liability of paying the costs

of those affidavits. The only more satisfactory remedy is one which I am aware is difficult, if not impossible, to apply as the law stands, namely that no one should pay for these affidavits at all, and that the solicitor who has drawn these affidavits and made copies of them, and so forth, should be left out of pocket thereby."

#### MR. JUSTICE SHEPHARD'S CONVOCATION ADDRESS.

Mr. Justice Shephard has unintentionally confined his attention to the weak points in the case. He has performed the office of the advocate and for the nonce has thrown off his judicial impartiality. Undoubtedly there are practices amongst Vakils which stand in need of reformation; there are some men among them who are no credit to the profession: there are many whose English is not as chaste as that of a Londoner: But, one may boldly say that no country has produced within such a marvellously short time a class of men whose ideal of professional integrity, whose mastery of a foreign language, whose grasp of the principles of an alien system of Law, and whose conception of their duty towards the society at large and towards the Government of the country are more commendable and praiseworthy than those of the legal practitioners of this country. It is a pity that on the eve of his retirement Mr. Justice Shephard should have left on record such an unfavourable verdict on the qualities and qualifications of Vakils as a class. It is generally believed that Mr. Justice Shephard's attitude towards the Vakils of Madras, as a class, was never very friendly; and this parting shot will be interpreted as showing that he is unfriendly to the growth and popularity of this class of practitioners. But it is not fair to the learned judge to ascribe to him any feeling of jealousy or bitterness. There is no doubt that Mr. Justice Shephard has had experience of the frailties of the Vakils, and he is really anxious that they should reform themselves. We are sorry that the tone and tenor of the address should be calculated to engender the suspicion that it is not a friend that wishes well of the Vakils that has spoken.

#### MR. PENNELL.

It must be confessed that Mr. Pennell's recent judgment is not an example of what a judicial pronouncement in a case of murder ought to be. The extraneous matters introduced into the decision of the case mar the effect of the conclusions arrived at. Mr. Pennell is a wronged man. If all that he says in his judgment is true, there is no doubt that he has been subjected to unjustifiable executive intolerance. While he is writing his judgment, the resolution of the Government in the Chupra case is sent to him. Then the remarkable conversation between the Lieutenant Governor and Mr. Pennell reveals a state of affairs which shows that a judge has to

see that his judicial opinions are not in conflict with the views of his superior in the Executive Department. But all these incidents will not justify the importation, into a judicial document, of personal squabbles and of other matters utterly irrelevant to the decision of the question whether the accused before the judge committed the murder. We undoubtedly feel that the treatment accorded to Mr. Pennell by the Lieutenant-Governor and by the Chief Justice must form the subject of enquiry either in India or in England. It will strike at the root of judicial independence if a judge should be required to satisfy the Executive Government that his decisions are not opposed to the views of the Government regarding individuals and institutions. The way in which the release on bail of Mr. Reilly has been brought about shows that where an influential European is charged with the most serious offences, there is no official that will not go out of his way to see that he is set at liberty. This curious episode contrasts very unfavourably with the attitude of the Bombay Government in the case of the Natus. Mr. Pennell's distant relation, the Lord Chancellor of England, may not consider it necessary that he should interfere in the case of his wronged relative. But persons who are less than kin may be more kind, and Mr. Pennell may find his position vindicated by persons to whom no telegram from a Chief Justice will be addressed.

#### LAWS AFFECTING THE LIBERTY OF THE SUBJECTS DURING THE LATE REIGN.

The Editor of the *Canadian Law Journal* briefly summarizes the beneficent effects of the Laws of Her late Majesty's reign in so far as they dealt with the lives and liberties of Her subjects. The picture is by no means overdrawn and we feel no doubt that the description would apply as well to self-governing Canada as it would to civilian-ruled India. "Not the least important advancement during the reign that has just closed has been the growth of Law and order and the increased security of life and property throughout the Empire. Perhaps the greatest blessing and the one most essential to the welfare of any nation is the strong, sleepless and impartial administration of justice. Since the Chartist riots in 1839, there has been no serious popular outbreak, and there now exists among her people to a degree unknown in almost any other nation, that sense of safety and security so necessary to human happiness, and so indicative of a high order of consideration. The criminal and dangerous classes have learnt to realise that the arm of Law is

stronger than they and that it reaches to the ends of earth. Perhaps the sight so often seen in the crowded thoroughfares of London may in a simple way illustrate the majesty of the Law. A quiet man in simple uniform steps slowly forward and lifts his hand, and at once every vehicle whether it be the Queen's carriage, the Prime-minister's brougham, or the Costermonger's cart becomes motionless. A wave of the same hand and the roar of traffic begins again. The man is only a Police constable, but behind him is the whole power of the Empire."

#### THE LAW OF 1900.

The *Bombay Gazette* has been publishing a series of articles dealing with the various questions of law adjudicated upon during the year 1900. The decisions of all the four High Courts are discussed with reference to each of the important branches of law, thus enabling the student of law and the lay critic to see what interpretations have been placed by the various High Courts upon principles of substantive and adjective law which by a fiction he is supposed to be conversant with. The articles are written with clearness and precision and they show that the writer is not a mere indexer but something more. Thus in dealing with the subject of contracts, after referring to the elaborate judgment of the Allahabad Chief Justice in 22 All. 307 the writer rightly points out:

"Admitting that this is the law, yet as a matter of convenience and to avoid public time being wasted by a multiplicity of suits or the same cause of action but against different individuals, we may consider that the Court which has the conduct of a suit would be acting properly, if it would exercise the power given by section 32 of the code and join the name of any person who ought to be joined as a defendant to enable the Court effectually and completely to adjudicate upon and settle all the questions involved in the suit. Procedure may be machinery, but it is machinery directed to useful ends and if there is no injustice in the law which requires the plaintiff to include his whole claim on the cause of action in one suit at the risk of losing his right to sue on the part omitted, there can be no injustice to require him to proceed against all the proper defendants in one suit instead of attacking them individually."

Other articles contributed by the writer are on "The Law of Property" and on "Specific relief,—Trusts-wills." All of them are ably written and show the grasp which the writer has of the case law of India.

#### Trade & Industry.

*By Mercantilist.*

#### GOVERNMENT TRAINING FARM IN NEWBRUNSWICK.

The interest taken by the Canadian Government in the industrial development of the country has been a prominent feature of its recent history. The latest move on the part of this Government is in the direction of providing young men with an efficient training in agriculture, so as to fit them thoroughly to farm intelligently and to profit. The farm is intended to offer to boys and young men, especially of the class that comes from the great English public schools, a thorough, practical, three years' training in agriculture without payment of any fees whatever. The farm has already been established and is in charge of an English expert who is a thorough agriculturist and efficient teacher. It is designed to carry on all its work in the most practical manner and to be throughout on a paying basis, and thoroughly self-supporting, presenting all the conditions of a farm as such in practical operation. The boys will themselves do practically everything that has to be done, getting direct experience in stock-raising, dairying, crop raising, marketing, and so forth. The farm will be inspected from time to time by the members of the Agricultural Department of Government who are to see that only the most approved methods obtain. Though no fees for instruction are required, a sum from 30 £ to 40 £ will be levied from each boy for the first year only, when he is practically of no service, so as to cover the cost of board and that of breakage of farm machinery. At the end of the period of training, the director will personally assist each boy in his selection of a situation. In the meantime, what capital he has may be invested and accumulating instead of a large portion of it being paid out for instruction.

#### MELTED WOOD.

A French Inspector of Forests, named De Gall, has succeeded in melting wood by means of very high temperature combined with high pressure, says the *Lurettion*. The escape of the gases which form while wood is burning is hindered, and when the wood has been reduced to a liquid condition and has settled, it does not in any way resemble the body which it before was. It is, in fact, more like coal—black, hard, and heavy. When broken, the surface is seen to be very finely grained, and it will take a beautiful polish. There is, however, no longer any trace of organic structure visible. On the other hand, it possesses many qualities which may finally

lead to its adoption in various industries. It can be pressed into any form, is impervious to water and to the action of acid, and is a non-conductor of electricity. Melted wood is without question of the highest scientific interest.

#### LOCK-MAKING.

A padlock, says the *Indian Import and Export Trades Journal*, is one of the articles of European manufacture that has a wide distribution in India. It is found in districts where no other type of iron-mongery has penetrated. Of course it is of the very cheapest kind and the protection it affords is not much better than that of a bit of rope, but as it has a more attractive appearance than the Indian padlock, it has the preference. Padlocks of the more expensive type in brass cases are being made here in increasing quantities but the cheaper article is so cheap as to defy the economic resources of the Indian artificer. The wholesale value of this kind of padlock is now three farthings each in the neighbourhood of Wolverhampton. Such an article must be entirely machine-made even to the rivetting. The japanning is probably the only bit of hand-work upon it. The mechanism is made by means of presses and the maintenance of these presses in good working order constitutes the essence of the art of lock-making. Every cut must be clean leaving no ragged edges and each piece must be of the true finished size, neither more nor less. It is in the adjustment and maintenance of tools that the Indian manufacturer is most at fault. He has no standard gauges and his notions of accuracy are of the vaguest description. There is nothing to prevent the local manufacture of much of the ironmongery that is now imported except the imperfect knowledge of method that is so general in India.

#### THE MERCHANDISE MARKS ACT.

A recent issue of *Indian Engineering* has some plain words about the working of that doubtful piece of legislation, the Merchandise Marks Act. The object of the Act may be simply to collect statistics concerning the origin of imports. Such a reason would not, however, justify so troublesome and worrying a law, because the information might be obtained far more easily than by compelling manufacturers to stamp the origin on every single thing. Another object may be to fight with fraud and inculcate morality. This is a righteous object and is wholly good, inasmuch as it seeks to save the sinner and protect his victim. A Merchandise Marks Act should have this as its only object. "There is, however, one idea more with which such laws have been compiled and this is far too obviously apparent in all existing Acts: it is a narrow minded small

idea born of short-sighted prejudice. The average Englishman preaches free trade and then cries to his customers, "Support English Industries!" He wishes foreign produce stamped simply that sentiment may help some customers to buy his more expensive or inferior stuff. If Germans make an article better than we can make it, or as well and much more cheaply, then let us all buy this of Germans and let those Englishmen cease making that in making which they are unable to compete with Germans and spend their labour on some other work that they do best. Thus will the whole world benefit—English and German too."

"Cheap and nasty" is not a characteristic of the manufactures of any one particular country more than of any other. Good and bad watches are made in England as in Switzerland, so that, fairly speaking, "Made in England" should be insisted on as much as "Made in Switzerland" leaving the fittest to survive. We fancy the main object of the Act is to prevent and detect fraud. If other reasons are assigned in support of the legislation which are lame, no notice need be taken of them.

#### THE COHILL ELECTRICAL TYPE-WRITER.

This is the invention of a Washington man, Dr. Thaddeus Cohill, who has applied electricity to impel the mechanism. A magnet is placed in the machine to impel the type bars, space-mechanism, and all the other moving parts; when the finger of the operator merely picks the letter to be printed, touches it tightly, the circuit closes and electricity performs the work. No matter how hard a key may be struck, the impression is always uniform. The machine is also equipped with a rheostat, by means of which stronger current may be secured for manifolding. This discovery seems to be opportune as typewriters have come into use in every business house and in some they have a system of keeping books with type-writing machines.

#### THE UTILIZATION OF WASTE.

The record of the utilitarian spirit of the nineteenth century is no less striking than the progress of science. Most impressive of this fact is the utilization of waste products. Take, for example, the stalks of the Indian maize. In some parts of America, the corn stalks are used for fodder, but in the vast fields of the middle west and south, little or no value was placed upon them after the corn had been gathered. But during the last few years, revolutionary discoveries have been made and the corn stalk has become almost as valuable as the corn itself. Here is a list of products that have already been made on a commercial scale from the maize-stalk, furnished by a writer in the latest number of the *Arena* to hand:—



1. Cellulose for packing coffer-dams of battle-ships, thus preventing them from sinking when pierced by balls or shells.

2. Pyroxylin varnish, a liquid form of cellulose, the uses of which are practically unlimited.

3. Cellulose for nitrating purposes, for making smokeless powder and other high explosives, for both small and great arms, as well as purposes for which dynamite or other explosives are required in various forms and degrees of strength.

4. Cellulose for packing, it being the most perfect non-conductor known against heat or electricity, jars or blows.

5. Paper pulp and various forms of paper made therefrom, both alone and mixed with other grades of paper stock.

6. Stock food made from fine ground outer shells or shives of corn stalks, and also from the nodes or joints. The leaves and tassels also furnish a shredded or baled fodder.

7. Mixed feeds for stock, containing fine ground shells or shives as a base, and in addition thereto various nitrogenous meals and concentrated food substances, or blood, molasses, distillery and glucose refuse, sugar-beet pulp, apple pomace, and other by-products.

8. Poultry foods of two types, namely—type 1, containing a dominant nitrogenous factor for laying hens, and No. 2, containing a dominant carbohydrate factor for fattening purposes.

Another illustration of a by-product becoming valuable is the cotton seed. For generations the seed was considered a nuisance but now a rich yield of an immensely valuable oil is produced from the seed—an oil already in extensive demand in domestic cooking, in the making of some of the most vegetable oil soaps and in numerous other fields where a pure healthful oil is demanded. The products of the slaughter-house furnish another illustration of the utilitarian spirit. Here everything is now utilized, the hair, the hides, the bones, the blood, the horns, and hoofs and the entrails. Want of space forbids us from continuing the list of waste products now turned to great use, but the above illustrations may be taken as typical of the utilitarian spirit of the past century.

#### INDUSTRIAL MUSEUM IN BAVARIA.

It having been ascertained that the industrial classes in Bavaria made too little use of modern machinery and mechanical appliances, Government have established a permanent exhibition of machinery and tools suitable for persons engaged in small industries ("kingewerbe") at a cost of about £17,500. The Bavarian industrial Museum has also helped to found seven work associations, which have been supplied with 77 power motors, chiefly for association of joiners, cabinet makers, and shoe makers; lectures have been given in various parts of the kingdom and literature on the subject has been disseminated.

#### ILLUMINATION BY WOOD GAS.

It is stated that the streets of Petersburg, South Australia, will shortly be illuminated with wood gas. The generating plant is said to be simple, and the gas may be extracted from any kind of wood by extreme heat, whilst the cost of the wood is returned in the value of the charcoal that comes from the furnace. Tar is also extracted, and the sap is said to have medicinal properties.

#### Medical.

*By a Doctor.*

#### "ON SANITARY AND OTHER MATTERS."

This is a handsome little book, by George S. Keith M.D., F.R.C.P.E., (Adam and Charles Black, London) which must not be regarded merely as an addition to the already numerous treatises on matters sanitary, but rather as providing additional information in reference to sanitary and economic matters. Evidently, the author speaks very much from personal observation and the public would be well advised in giving his papers a study. For men who have fairly mastered the science of health and sanitation, the book should prove suggestive, though many of the suggestions are not readily practicable. Here is what the author says concerning

#### WASTE OF WATER IN WATER-CLOSETS

which is the first subject discussed:—"A large portion of the water used in accordance with our present habits may be saved, not only with no loss to the health or convenience of the community, but with much advantage to both.....Now this twenty per cent. of water (used for flushing the water-closets) may be saved by using a small quantity of dry earth in an earth closet.....The arrangements necessary for converting a water-closet into an earth closet are of the simplest description. The pipe is cut and sealed under the old pan which is removed, or a pail with a handle put in its place.....A plain deal box to contain enough for a week may be made for the purpose.....The pail is lifted out every fourth day or so and emptied in the garden on the soil nearest where it is to be used as manure.....From the economic side the water-system compares very badly with the earth-closet. Besides the huge loss in water, the value of fertilising matter lost to the soil is even greater. Then in the unnecessary quantity of water used in

#### BATHS

the amount of water may equal that used in water-closets.....For the purpose of cleanliness a warm bath

once a week, preferably at night, "is sufficient for the delicate and the change from what is considered a bracing cold bath at every morning makes all the difference between good health and poor health to many; but for all a good rub with a towel wrung out of cold or tepid water as is most agreeable every morning or occasionally, is perfectly sufficient."

#### HOW TO PROFIT BY SEA VOYAGE.

In another chapter the author deals with this question in a clear and concise manner and gives some hints to those who wish to derive most benefit from the sea-voyage. First as to the vessel, it is suggested that a slow steamer is infinitely superior to an ocean greyhound travelling at the rate of 18 or 20 knots per hour and upwards. A good airy cabin, however small, is preferable to a share of a much larger one. But the greatest error committed at sea is indulgence in rich food, the freshness of the sea air helping to sharpen the appetite. This temptation must be resisted, if one wishes to get real benefit from a sea-voyage. To avoid sea-sickness "great care in diet for some days before sailing is better than taking a pill the day before, as is often recommended. A very moderate amount of plain food, if one has an appetite for it may be taken, but if there is no appetite no food should be taken, till appetite comes, and nothing but water, hot or cold, as is most agreeable." Of remedies, the author has known none of certain value as liquorice or liquorice and peppermint lozenges.

#### SNAKE BITE.

The most effective method of combating the fearful consequences of snake-bite has been for a long time engaging the attention of the medical profession and various ways of treatment have been suggested. It is well, however, that people should be acquainted with the following suggestion for which we are indebted to the *Scientific American*:—

One or several tight ligatures should be made above the wound, followed perhaps by deep scarification; then injection of anti-venene, if at hand. If the latter cannot be had, injections should be made of a solution of hypochloride of lime, 1 to 60 at several points near the bite and elsewhere. Stimulation, if necessary, by either strychnine or atropine or alcohol; hypodermoclysis of physiological saline solution; lavage of the stomach; artificial respiration for hours; and, not least of all, continuous encouragement of the victim, for a deep mental prostration goes together with the physical depression of the nervous centres.

#### MALARIOUS FEVER.

Writing on the maltreatment of this disease in the last number of the *Calcutta Journal of Medicine*, Dr. Mahendralal Sircar vigorously protests against the use of patent medicines for fever which command extensive sale. It is a sad thing that the attention of the responsible medical authorities who have made malarial fever a subject of their special study has not been given to the injurious way in which these patent medicines are administered only to increase the suffering, and hasten the death of the fever-stricken patient. Says Dr. Sircar:—

With the few exceptions of patent medicines professed to be made up of indigenous vegetable drugs, the bulk of them are prepared with the same medicines which are recommended and used in our therapeutics for the treatment of malarial fevers. But the mischief lies in the injurious practice of mixing all of them in one mixture, and using the same as a panacea in all stages of the disease, irrespective of the conditions in which each of the medicines is indicated.

—o—

#### Science.

—  
By a Master of Arts.  
—

#### DOMESTIC SCIENCE.

This book is written by Thomas Cartwright, B.A. to meet the requirements of those who have to study "Domestic Science" as prescribed by the Education Department's Code, England. The author explains in his book most clearly and impressively all the simple truths of science that the girls who study domestic science are expected to know. The simple experiments made use of in the book for illustrating scientific principles and which the author rightly insists should be performed by the students themselves are well calculated to impress on their minds the principles they are studying. It is in every way a suitable text-book in domestic science. Its usefulness is not confined to those who have to study for examinations for which it is intended. It will serve as an admirable introduction to the further study of sciences but by itself it would give to the general reader a fair knowledge of the elementary principles of science that one has exemplified in his life.

#### ACETYLENE.

The discovery and uses of this illuminant are generally known; it, however, remains to combat prejudice in regard to the installation of the gas. Much fresh matter

is furnished in the February number of the *Humanitarian* by a Member of the Royal Institution. The writer mentions some important details in regard to the question of the gas generation and enters into a technical account of the same, setting out the rules to be followed in choosing a generator which may be of use to any one wishing to adopt this light. The essentials of successful acetylene lighting are:—

(1) Iron gas pipes, well-jointed, no composition or other soft metal being introduced; (2) fittings of the ordinary kind of very good quality. Acetylene will discover and pass out of a weak place or defectively jointed fitting more quickly than coal-gas; hence there must be good fittings and good joints. (3) Purification of the gas. The purifying material requires to be renewed, say, twice a year. A generator, and all its parts should be strong and not liable to injury, leakage or destructive wear and tear. Strong galvanized wrought-iron with heavy soft cast fittings are best, these being painted or japanned. A generator, whatever its size, should be charged in a brief space of time by a lad servant or other unskilled person and in case of its being carelessly over-charged it should be provided with a positive working escape vent to discharge the surplus gas to the open air. A very important part is that the generating part should be in duplicate. It must be understood that success or failure rests with the generator, the apparatus which makes the gas. No gas installation of any kind on a fairly large scale should be minus the 'Governor' which controls the supply to the burners. The bell of the gas-holder should not be loaded with carbide chambers which produce a varying pressure. The level of the water in the holder should be regular and undisturbed. The gas as generated should pass through a condensing chamber containing cold water. A complete generating plant should have no working gear or mechanical parts to get out of order.

#### AN ELECTRICAL RESURRECTION.

An American electrician named Schellinger claims that a speedy resurrection is possible if an electric shock has been the cause of death. He has been experimenting at St. Joseph, Missouri, on a cat which he killed by electricity. The animal was examined by several physicians, who pronounced it undoubtedly dead. After five minutes an alternating current of low power was started, and in a few seconds the heart action was restored. Presently the deceased cat was frolicking about as lively as ever. Mr. Schellinger believes the same results would follow in the case of a human being,

provided that the operation began within a few minutes of the accident.

#### PHYSIOGRAPHY.

Mr. Joges Chandia Ray M.A. Professor of Physical Science, Katak College, has brought out "A Primer of Physiography" The special feature of the book is that the illustrations are drawn mostly from phenomena with which the Indian student is familiar. The book is written in a simple style, and the treatment of the subjects, or rather, the various subjects included under the term 'physiography' is clear and lucid and is well fitted to give, as the author says in his preface, our Indian students an elementary knowledge of the general principles of modern physiography in a form calculated to rouse an intelligent interest. The copious illustrations and the excellent get-up of the book which are of no small importance in the education of beginners, enhance its usefulness. Indian meteorology receives fuller treatment than in ordinary books on physiography.

We have rarely come across a better written primer, and we have no doubt that the book will be found very useful and largely used.

#### THE EUCALYPTUS.

In an interesting article in the *Scientific American* Mr Nicholas Pike makes some useful observations on the nature and uses of the Eucalyptus tree which appear worthy of notice. There are more than a hundred species of Eucalyptus. One of those Eucalyptus Globulus, commonly known as the blue gum tree must be, particularly interesting to Indian readers, as that species is largely cultivated on the Nilgiris. It is known in Australia as the "fever tree" as the preparations made of it are most efficacious in fevers. The medicines from the Eucalyptus have a great advantage over those of quinine. They have none of the evil effects of quinine.

The medicine has a warm aromatic bitter taste and is invaluable in exciting the flow of saliva. It lowers arterial tension, and is useful in hysteria, cerebral anemia &c. When the leaves are smoked, they relieve asthma, bronchitis and whooping cough and have also been employed as lint for wounds. When properly administered, it will cure malarial fevers where quinine utterly fails to do more than temporarily arrest them." Nearly all the varieties grow very tall, attaining the extraordinary height of 40 to 500 feet! One of these had a cavity in the trunk in which four men on horse-back could stand.

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Contract rates on application.	

Lord Rosebery said in one of his recent speeches that half the foreign policy of England was commercial. This is true not of British policy alone but of that of all other nations. The aim of each Government at the present day is how best to supply its people with an increasing *quantum* of the means of subsistence and comforts ; and to this end, the regulation of industry and commerce, both at home and abroad, has been included among the problems which receive attention at the hands of statesmen. Subsidising new industries, bounties on exports, protective duties on imports, technical and scientific education, organisation of exhibitions, maintenance of industrial and commercial museums, publication of pamphlets and periodicals, these are some of the means by which each State tries to achieve its object. At the present moment when so much is being talked and written on the aid which the Government in India has given or proposes to give towards improving the material condition of the country, it would be particularly instructive to know what is being practically done abroad, so that a correct idea may be formed of the extent and usefulness of the measures adopted in India. The fact is the State in India has done precious little hitherto, and what it proposes to do is veneered with so much benevolence that, ignorant as we are of what is being done by the Government in other countries, we, in India, are prone to look upon the little doles made by the Government in this country as munificent aids. Further, the Government or the officials responsible for the devising of means for developing the resources of the country, while making a show of their good intentions, practically fight shy of the real issue. It is undeniable that the Government is doing much to develop India materially, but it is also a fact that the natives are helped as little as pos-

sible in attaining industrial prosperity. The colossal industrial expansion of England, Germany and the United States and the vast accumulations of wealth made by those countries have been rendered possible not by using the hand of man but by the employment of machinery capable of performing the varied and complex processes required in manufacture and industry of all kinds and by the extensive application of extra-human power for the operation of such machinery. Yet, in India, this first lesson of the industrial revolution of the world is ignored and we are told that the salvation of India will be attained by improving the indigenous *manual* industries, advancing the skill of the workmen in decorative arts, in metal work, in making furniture, and in weaving cloth by the hand. We do not wish to decry the importance of these industries in the industrial economy of advanced nations with surplus capital lying idle for want of profitable investments. But to work up India to compete in manufactures and commerce with the leading nations of the world, it ought to be realised at once that the manual labourer is nowhere against the manufacturer with machines. What we require is the distinct recognition of the modern conditions of production and distribution in any scheme of industrial development of the country. There is a feeling that this fact will not be recognised, and that lines of improvement based on any extensive use of machinery must not be expected from the Government of India. The industrial revolution which will be effected by such measures will certainly tell on English manufacturers and they will lose their most lucrative market in this country. Indeed, Mr. Tozer said as much the other day in his lecture before the Society of Arts when he remarked that English manufacturers must be prepared to encounter severe competition in India in the future. If this should be the idea of the Government and the officials responsible for inaugurating and working schemes intended to develop the resources of the country, no substantial good can be expected, and the sooner we realise this position, the better.

The value of exhibitions in the industrial development of a country is immense. In England owing to the exertions of the late Prince Consort the first exhibition of the kind was held in 1851. "It was" to quote the words of Sir Wemyss Reid "the starting point in the modern history of manufacturers and arts." In many ways the exhibition of 1851 gave an impulse to the promotion of technical education. According to Sir Philip Magnus "it afforded for the first time an opportunity of comparing the products of our shops and mills with those of other countries, and showed in strong relief the bearing of art on manufactures, and the possibilities of improvements which might follow from the alliance of industry with science. It was a great object lesson from which we have never ceased to profit." So much for England. Perhaps many are not aware that it was the 'World's Fair' at Philadelphia in 1876 which awakened Germany to the importance of industrial as distinct from technical education. The German Commissioner, Reuleaux, telegraphed to Prince Bismarck that "our goods are cheap but wretched." Bismarck immediately instituted inquiries into the causes of the industrial inferiority of Germany. The defects were remedied and as a result the present German industrial growth has become an object of envy. In India advantage may be taken of the annual sessions of the Indian National Congress and of the various Provincial Conferences to arrange a grand industrial show where the articles might be available for sale. A special committee must be appointed to look after this. The organisers of the Congress this year at Calcutta have special facilities for doing this. There is the Industrial Association in that city which has done good work. It has of its own accord held more than half a dozen exhibitions at different times and if the Calcutta Congress Committee will only give them the necessary funds, we have no doubt a good exhibition can be held.

The highest honor which the citizens of Bombay could confer on Mr. Wacha. Dinshaw Edulji Wacha has been bestowed on him. We refer to his unanimous election last month to the Presidentship of the Bombay Corporation. Mr. Wacha has been known to be an extreme politician, and the fact that European and native members of the Corporation have elected him is a signal proof of their appreciation of his high integrity and ability. Mr. Wacha is one of those who care not for popularity. If at times he has been strong in the use of expressions, it is due to the intense sincerity of his convictions. We congratulate Mr. Wacha on the honor that has come to him unsought and we trust more is in store for him.

The unfortunate crime of being a young man has not stood in the way of Professor Gokhale. the recognition of Mr. Gokhale's high abilities and character. His election to the Viceroy's Legislative Council by the non-official members of the Bombay Corporation has won the approval of all sections of the press and the public in India. Professor Gokhale has given sufficient proof of his high spirit of self-sacrifice, and one has only to cite his services to the Fergusson College. He is a very able student of Indian finance and he has a clear grasp of our economic situation. Indeed, this is to be expected of a diligent pupil of the late Mr. Ranade. Mr. Gokhale's evidence before the Royal Commission on Indian expenditure was very much appreciated and we are told he showed such a perfect mastery of facts and figures that it won the appreciation of Mr. Leonard Courtney. We learn that Mr. Gokhale has an idea of entering the House of Commons and serving his country. We trust the country will equip him for the "hustings."

Subscribers who have not as yet paid up their subscriptions are requested to remit the same as early as possible. If desired, the next number will be sent by V. P. P.

Years ago, criticising the finance of the Crimean war, the late Mr. William

The Cost of the Transvaal war. Gladstone, gave utterance to the following remark-

able words in the House of Commons :-

"There is pomp and circumstance, there is glory and excitement, about war, which (notwithstanding the miseries it entails) invest it with charms in the eyes of the community, and tend to blind men to those evils to a fearful and dangerous degree. The necessity of meeting from year to year the expenditure which it entails is a salutary and a wholesome check, making them feel what they are about, and making them measure the cost of the benefit upon which they may calculate. It is by these means they may be led and brought to address themselves to a war policy as rational and intelligent beings, and may be induced to keep their eye well fixed both upon the necessity of the war into which they are about to enter, and their determination of availing themselves of the first and earliest prospects of concluding an honourable peace."

These words carry much force at the present moment. The British nation which clamoured for war with the Boers will now realise what a dear price they have had to pay for it. The budget statement presented by the Chancellor of the Exchequer would have been startling to many. Sir Michael Hicks-Beach has estimated a deficit of 55 millions and asks for a loan of 60 millions. The national debt has again leapt up to over 700 millions. The Crimean war cost England about 70 millions, but the Transvaal War has already swallowed 153 millions. 67 millions have already been borrowed and the sanction of Parliament has been obtained for borrowing an equally large amount. The Chancellor may well say boldly, "It can no longer be considered a small war; in cost it is a great one." Thus the attempt to subdue two farming republics has involved the British nation in severe financial straits, has made them put up with several taxes which on previous occasions would have called forth much opposition, has made them overthrow their free trade doctrine, submit to several customs and excise duties and allow their income-tax to be increased. They who sow the wind must reap the whirlwind. Let us hope with the late Mr. Gladstone that they may be induced "to avail themselves of the first and earliest prospects of concluding an honorable peace."

Mr. J. D. Rees, C.I.E., the well known Madras civilian who recently retired from the service

**The Southern Satrapy.**

read an interesting paper before a meeting of the Society of Arts held last month. The subject was "Madras the Southern Satrapy" and the chair was occupied by Sir M. E. Grant Duff, a former Governor of this Presidency. Madras which has till now been smarting under the term "benighted" will find much consolation in Mr. Rees' lecture. Mr. Rees has been in India for a fairly long period of time, and unlike other officials of his service mixed freely with the people, and by his intimate acquaintance with their languages was in an advantageous position to know the inner life, character, wants and aspirations of the people. The points touched upon in Mr. Rees' lecture are many. He is very optimistic regarding the economic condition of the people and as usual with the other members of his service sings the same roseate song. On this question the official and non-official views are at opposite poles, and we do not propose therefore to refer to it at present. Further we may observe that when he was here, Mr. Rees had no reputation for his knowledge of the economic condition of the people and if he has improved his knowledge in that direction, it must be after his recent retirement. We pass on therefore from the controversial to the non-controversial portion of Mr. Rees's otherwise excellent lecture.

The charitable spirit of the Hindus receives his warm appreciation. The

**Charity of the Hindus.**

Hindus, carry out very literally the precept of the great lawgiver Manu, that "a householder must give as much food as he can spare to those who do not cook for themselves." Among the many admirable qualities of the humane and civilised peoples who inherit our Indian Empire, none is more striking than their unobtrusive unadvertised charity. This is the excellent certificate given by Mr. Rees, who warns people not to misjudge the charity of the Hindus by the paucity of their contributions to the famine fund for "no record exists of the charity privately disbursed in every town and village."

Mr. Rees points out that the popular English notion of the condition of

**Position of Indian Women.**

Indian women is not correct. Speaking of the zenana system, he observes that where it does exist, it is not the torture house it is represented to be. The Indian women love the system though it is not

tempered with liberty. The fact is, says Mr. Rees, we greatly underrate the liberty and influence of women in India and their intelligence because the English women cannot talk the native languages, or if they can, are almost pledged to regard native customs as redolent of heathenism. Speaking of the marriage tie, Mr. Rees rightly remarks that it is probably little known in England that though the Hindu religion permits polygamy under certain safeguards, the instinct of the people is so monogamous and their domestic standard is so high that they rarely avail themselves of the privilege unless the first wife has no male issue in which case another marriage becomes a religious duty. "I am not at all sure that the domestic standard of the Hindus is inferior to those actually obtaining among European nations." Mr. Rees urges that the sacred laws of the Hindus insist on the observance of chivalry to women, for Manu has laid down "Strike not a woman with a flower."

Nearly a hundred years ago, Abbé Dubois, the well known French Missionary, declared it as his

firm conviction based on long and intimate acquaintance with the people that he found it hopeless to convert high caste Hindus to Christianity. The Abbé was perfectly right. Missionaries make a grievous mistake when they suppose that the spirit of inquiry which prompts the modern Hindu to examine his social and religious institutions critically is an index of his dissatisfaction with his religion. To those who proudly believe that the old faiths are dying and that Christianity will ere long become the religion of India, Mr. Rees gives the following answer:—So far as my own observation goes there is nothing to confirm this view, but much pointing to an opposite conclusion.

In the concluding portion of his lecture, Mr

**Civilians and Vernaculars.**

Rees makes a plea for the English officials knowing the languages of the people.

To me it is inexplicable how any officers, other than native writers in the Secretariat, can possibly perform in an efficient manner the functions of an Indian administrator without a far greater knowledge of the vernaculars than is required for passing the compulsory standards.

Here we must bring to a close our summary of the main points in Mr. Rees's lecture. Madras and we may say, the Indian community, is much indebted to him for presenting before the British public the better points of native life and character.

[ *All Rights Reserved.* ]THE HIGHER EDUCATION OF ENGLAND  
DURING THE VICTORIAN ERA.

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IN no department of social life have greater changes taken place during the reign of our great Queen than in the higher education, by which I mean the Schools and Universities of England. When the Queen came to the throne, the only Universities in England were Oxford and Cambridge. They were both strongly clerical in character. At Cambridge it was almost impossible to hold a fellowship without being a clergyman. The colleges had in their gift a number of livings, which were used as retiring pensions for teachers who had done their work, and canonries were employed in a similar manner to supplement the incomes of professors. The students were mainly of two kinds, those intended to take orders, or to devote themselves to the practice of teaching, and those who came to the University to spend three or four years of a luxurious and gentlemanly existence, with the intention, perhaps, of devoting themselves to public life or to the Bar. The first class were expected to work hard, the second were left very much to themselves. Undergraduate life was extremely expensive, and too many left the University, having saddled themselves with a burden of debt, which it took many years to redeem. At Cambridge the pass degree was obtained in great measure by the attendance at lectures where no attention was paid to the instructions of the lecturer, and the only avenues to an Honour degree, are the Mathematical and Classical Triposes. Indeed, the Classical Tripos was a comparatively recent institution, and at first no one was allowed to enter for it who had not previously obtained a degree in Mathematics, to such an extent did the Mathematical studies dominate the whole of University teaching.

The Oxford Great School, as it was called, gave a more liberal education, and to gain a double first,

that is a degree both in Classics and Mathematics, at Christ Church was a passport to public distinction, for Professorial education was almost unknown in both institutions, indeed, the possession of a professorship was regarded as a pleasant and even a lucrative sinecure. At Oxford the college teaching was very fairly developed, but at Cambridge the higher instruction was entirely in the hands of private tutors who were called *coaches*. Fifty years ago the great mathematical coach at Cambridge was Hopkins, and the great classical coach Shilleto, and no one had a fair chance of distinguishing himself in either of these two subjects, unless he put himself in training under one or other of these gentlemen. The work they did was indeed portentous. Shilleto took twenty four pupils, each of whom he taught for an hour, three days in the week, being thus obliged to work for at least twelve hours a day. On each occasion a piece of Latin or Greek translation or Latin or Greek composition was prepared for the coach and carefully looked over, the rest of the hour was spent in reading some difficult author, but much time was wasted. These 'coaches' held no University appointments and stood entirely apart from the college system. Attempts to remedy these abuses and to give an education which really prepared for Honours were first made at Trinity in the early sixties, but the Mathematical Tripos is still in the hands of private tutors, although, by circumstances, which will be presently narrated, its influence has greatly diminished. Matters have now entirely changed owing to the influence of the Prince Consort, who became Chancellor of Cambridge University. The Moral Science Tripos was introduced which for some time attracted very few students, but by it the wedge had been driven into our antiquated system, which was to produce unexpected results. Degrees had always been given in Law as well as in Medicine and Music. At about the time when the Moral Science Tripos was first established, a Law Tripos was also introduced. Some twelve years afterwards, the Law Tripos



became the Law and History Tripos, and admitted to the Bachelor of Arts degree, certain portions of History having up to this time formed part of the Moral Science Tripos. Some five years later, Law and History were divorced and an independent Historical Tripos was established under the auspices of Professor Seeley, whilst the Moral Science Tripos confined itself to those subjects which might thus more properly belong to it. Thus a great revolution was effected and those humanizing studies which would fit a man to take part in public affairs and in practical life occupied an honourable and official position in the University.

During this period the study of science was neglected in the University, to an extent which was hardly creditable. It is true that a natural Science Tripos had existed since the year 1851, but in the five years from 1856 to 1860 there were only three candidates. In 1861 it was changed so as to admit the degree of Bachelor of Arts, but then only one candidate obtained a first class in three examinations. In 1872 we find the name of Michael Foster as an examiner for the first time. It is now one of the most important examinations in the University, and in 1900 more than forty were placed in the first class. The rise of the natural sciences, which may be considered to have taken the place which mathematics formerly occupied at Cambridge, produced many other effects. It is obvious, that, in these subjects, teaching cannot be given either in Colleges or by private tuition, and a highly organized system of public or professional education became a necessity; moreover scientific teaching demands a large amount of practical work, and laboratories of all kinds had to be provided, with teachers attached to them. The consequence is that we have a huge Physical Laboratory, a Chemical Laboratory of equal size, extensive buildings for the Medical School, Biological and Botanical Laboratories, all of which are being extended every year. As I write, a large plot of ground formerly belonging to Downing

College, is gradually being covered by vast palaces, intended to house Geology, Botany, and other branches of scientific education. To work this machinery, an army of assistants is required, the cost to the University has been enormous, and complaints are made that other departments have been starved by the growth of science. But the whole machine is instinct with vigorous life and no one who loves or respects the University of Cambridge can look upon this growth without any other feeling than pride.

To these have recently been added a department of Mechanical Engineering which has grown with great rapidity, while our last bantling has been the school of agriculture. What startling changes are these to have taken place in a single generation, how different is the Cambridge curriculum of to-day to what it was when Classics and Mathematics were the only avenues to its fellowships? The effect of scientific teaching has been even greater than this. Science is based upon original research, and the spirit of enquiry has had great effect in other departments of education. Classics instead of being a skilful manipulation of the Greek, Latin, and English languages, now comprises instruction in Philosophy, History and Archaeology. Proficiency has to be tested by the power of independent enquiry, and fellowships are gained after scouring the remains of the ancient world, in the hope of discovering new effects or new theories. Historical studies have been largely developed and encouragement is given for research in this department, which would be a credit to any European University. Modern languages also have not been neglected, although the popularity of this school has been hampered by too great an insistence on the knowledge of mediæval forms. Cambridge may need say, has taken every department of knowledge under its protection, and there are some who think that it ought to determine first what are the proper functions of a University, and then make up its mind that under no circumstances would it be tempted to go beyond them.

The account above given does not nearly exhaust the expansion of Cambridge activities in recent years, and I may say, that, while I confine myself mainly to Cambridge experience, similar developments have been going on at Oxford and elsewhere. Forty years ago Cambridge examined none but its own students, but since that time it has built up a vast system of extra University Examinations, and University teaching has extended its influence far beyond its own sphere. The University of Cambridge now conducts, not only in the United Kingdom, but in all parts of the world, Junior, Senior, Higher and Preliminary Local Examinations, which attract an enormous number of candidates, male and female, and the decisions of which are generally acknowledged and respected. Besides this, there is an elaborate system of what are called, University Extension Lectures, lecturers being sent by the University, to towns and even villages, to deliver courses of lectures on which examinations are held and certificates granted. These certificates are in certain cases accepted as an equivalent for University teaching. It was true, some years ago, that Cambridge examined ten times as many as it taught. I have not statistics at my disposal which would show whether the proportion is now greater or less, but it is probably about the same.

In this imperfect review. I have omitted one whole department of our work, that is the Higher Teaching of Women. On Bunker's Hill, about a mile and a half from the town, stands the College of Girton, well known throughout the world, as giving women an education precisely similar to that which is provided for men, while nearer to Cambridge, in the picturesque suburb of Newnham, stands a cluster of colleges devoted to the same work. The University has not consented to give women degrees, for fear that it might lead to the establishment of a mixed University. But women are admitted freely to all Tripos Examinations, where they meet men on their own ground, and not unfrequently beat them. We have had a

female Senior Wrangler, and a female Senior Classic, and there is no department of Academical knowledge, in which women have not gained high distinction. The founder of this movement was our famous Professor, Doctor Henry Sidgwick, whose untimely death is deeply deplored, and the Head of Newnham is his illustrious wife, the sister of Mr. Arthur Balfour.

Cambridge also has not neglected the training of teachers, although its activity in this field will probably be greater, as soon as parliament makes up its mind to impose a system of registration on the teaching profession. For more than twenty years, lectures have been given at Cambridge, on the Science of Education, and examinations held, on which certificates have been awarded, and recent years have seen the establishment of a Training College, in which Primary and Secondary students are educated together. Fifty years ago, a Cambridge man might have felt ashamed, when he compared the abundant list of lectures delivered at a German University with the meagre catalogue which his own *alma mater* was able to put forth, but now when he takes into his hand the bulky pamphlet issued every term by the Pitt Press, he need have no such feeling, and may be confident that every lecture therein described, is given by a competent scholar, and well attended by students. I do not say that Oxford and Cambridge stand at the head of Universities of the world, or that there is not, even now, much to be done. Perhaps it may be regretted that our literary activity is not so great as our zeal in teaching, and that the time of tutors is unduly occupied with administration and discipline which ought to be reduced to a minimum in a learned society. But it may be confidently asserted that no institutions in the world have grown so much, or have altered so completely in character as our great Universities have done for the last half century, and we may hope that, at the close of a similar period, further advances will have been made, and fewer causes for complaint will exist.

I must pass lightly over the remaining branches of my subject. Many large towns, Liverpool, Manchester, Leeds, Nottingham, Birmingham, have established Universities of their own, differing in character, in accordance with local needs. These may be regarded, not as rivals to our principal Universities, but as helps and handmaids to them. To obtain a degree at Victoria University, or at one of the Scotch Universities, is no reason why the person who holds it should not desire to clothe himself with another degree at Oxford or Cambridge.

Great changes have also taken place in our large schools. In the first place, public schools do not hold the exclusive position which they occupied fifty years ago. The charmed circle of public schools has been largely widened. It used to be said, when I was a boy, that Marlborough College once had the impertinence to challenge Eton College to cricket and they received this answer in reply, "Harrow we know, and Winchester we know, but who are ye?" Such an answer would not be given at the present day. The number of public school, has become so large in England that it would be difficult to enumerate them. Besides these a class of public day schools has grown up, which supplies Universities with many of their most distinguished students. Of these St. Paul's and Dulwich are perhaps the most distinguished, but there are many others. The expansion of studies, also, in the University, has been coincident with a similar movement in our schools. Science is taught everywhere, Modern Languages form a regular part of the course, and even History is not neglected. When I first went to school Mathematics was almost in the position of an extra. But it would now be impossible to conceive a properly organized school, in which it did not form an important part of the curriculum.

Perhaps the most noticeable change, during the past generation, has been in the attention paid to physical education, and especially school games. In many schools, masters are appointed quite as

much for their excellence in sports, as for any other qualification, and one has sometimes been tempted to think, that if the studies of a school have been organized as scientifically as the games, much better results would be attained. There may be, indeed, a reasonable fear whether too much attention has not been given to this side of education. There are two kinds of health, an out-door health, which demands every day a certain amount of exercise in the open air, and an indoor health which is compatible with the most sedentary occupations. When we consider that much of the best work of the world has been done by men who are chained every day for long hours to a desk, we may doubt whether those who have spent their years of growth in the pursuit of bodily exercise will succeed in the serious struggles of life. Mr. Gladstone said that he had worked so hard at Oxford, and had acquired such habits for application, that no office work afterwards seemed difficult to him. He had, I believe, worked ten hours a day during the whole of his course, and twelve hours a day, during part of it. This is an example, which may be held up to the imitation of the rising generation.

One satisfactory feature of our new education is the manner in which it binds together all the dependencies of the British Crown, the Colonies, and India. The University of Cambridge is crowded with Indian students, who enjoy to the full, the advantages of academical life and academical education. While the ease with which they adapt themselves to their new condition excites our admiration, we can only wonder at the skill with which they have been educated in India, so as to be fitted, in every way, to receive the highest culture which an English University can bestow, in every department of study which they may select for themselves.

OSCAR BROWNING.

The *Indian Nation* pays us a compliment. It asks, "Have we a journal like the *Indian Review*, so bright, so scholarly?"

ATMOSPHERIC NITROGEN IN ITS  
RELATION TO VEGETATION.\*

IN introducing the subject of nitrogen in its relation to vegetation, it will be well to set out briefly the reason why this subject has occupied, and still occupies, such an important place in the field of agricultural research as it does.

Early in the history of chemistry it was determined that all plants are built up of two distinct classes of substance, one of which becomes dissipated by combustion, the other which does not. The composition of the latter, the mineral portion, was only accurately determined later on, but it was readily recognised that the plant must rely entirely on the soil for a supply of the substances which together form this ash.

Regarding the portion of the plant which becomes dissipated on burning, the nature of the gases produced was determined in the last century by Priestly and Scheele, (the discoverers of oxygen) and Lavoisier. It was found that these consisted of water, carbon dioxide (carbonic acid) and ammonia; and that the organic portion of the plant consisted of compounds of carbon, hydrogen, oxygen and nitrogen.

It was also in such early days as these that the study of the assimilation of these elements by plants was first taken in hand. So early as 1771 Priestly observed that plants sometimes disengage carbon dioxide, sometimes oxygen and sometimes no gas at all from their leaves. I shall not further pursue the history of the experiments which finally proved that plants obtain much, if not all, of their carbon, and part of their oxygen from the atmosphere, and that most of the water which they imbibe is assimilated through their roots, but will conclude my reference to them by mentioning that these facts have been in our possession for more than half a century.

Moreover it was also readily recognised that the store of carbon dioxide and oxygen and water which was at the disposal of vegetable life, was, if not unlimited, nevertheless so very great that no fears need be entertained of the supply running short.

The question as to whether plants obtained the nitrogen of their frame from the soil or from the atmosphere, also occupied the attention of Priestly, who made some experiments on the subject so early as 1779. He was not only then ignorant of much which we know of the properties of nitrogen, but the apparatus at his command was also of a very primitive nature, and he could only draw general conclusions. His opinion was that plants do assimilate free nitrogen. Twenty years later de Saussure, to whom we are indebted for much of the knowledge we possess as to the requirements of plants, experimented on the same subject. He was in a better position to analyse gaseous mixtures than was Priestly, and he came to the opposite conclusion, namely, that atmospheric nitrogen does not take part in the nourishment of plants.

The question was of importance, for, whilst it was recognised that large supplies of mineral food and carbon dioxide were generally at the disposal of plants, the amount of nitrogen in the soil was often very limited, that of elementary nitrogen in the atmosphere being very large.

The next great experimenter who took up the question was Boussingault, who studied it as early as 1837. At this time much more was known of the composition of soils than at the time of Priestly and deSaussure.

Boussingault's earlier experiments only led to indecisive results, but he took up the question again in 1850 and following years, and a brief description of his method of experimenting will prove of interest.

The first point which he considered essential to a successful issue was that the soil in which the plants were grown should contain no compound of nitrogen, but that it should contain a supply of mineral food only. Secondly, he perceived that the

\* Copies of this paper can be had of the Secretary, Students' Association, College of Agriculture, Saidapet. Price 4 annas per copy. With postage 5 annas,

air surrounding the plants should be enclosed by a large vessel in order that outside contaminations should be avoided. Water was supplied before the seed was sown and an extra supply of carbon dioxide was provided for. The apparatus used was extremely simple, being a large glass spherical vessel with flat bottom; into the neck of this a smaller inverted sphere was inserted. Boussingault knew at this period that the atmosphere consists principally of oxygen and nitrogen, with only small quantities of carbon dioxide, and also that the plants as they grew would require considerably more of this gas than the air of the large vessel naturally contained. Therefore the small sphere was removed periodically, filled with pure carbon dioxide gas and replaced, when of course this carbon dioxide would diffuse throughout the larger sphere.

The soil employed consisted of ground pumice and ashes of stable manure, which were first treated with acids and then calcined thoroughly.

A little heap of this material was then made in the bottom of the larger sphere, a sufficient supply of water added, and the seed was placed on the top of the heap of soil. The large sphere was then closed. It will be noticed that the plants had at their disposal the reserve material of the seed, secondly a supply of mineral food from the ashes of the burnt manure, thirdly water, and fourthly air containing oxygen, a little carbon dioxide and much free nitrogen gas. Compounds of nitrogen were excluded as far as the experimenter was able to exclude them. It is probable that this was not rigidly the case, but it is certain that the amounts of such compounds were very infinitesimal and insufficient to materially vitiate the experiment.

The results which Boussingault obtained may be here suitably quoted; for they demonstrate how very patient the experimenter must have been to obtain them. It would be considered a large piece of work to-day; to him it was infinitely greater, for the then known methods of analysis were much more laborious than those at present at our disposal.

No.	KIND OF PLANT.	Duration of Experiment.	Number of seeds.	Weight of seeds.	Weight of crop.	Nitrogen in seeds.	Nitrogen in crop and soil.	Gain or Loss of Nitrogen.
				Grams.	Grams.	Grams.	Grams.	Grams.
1	Dwarf Bean	2 Months.	1	.780	1.87	.0349	.0340	-.0009
2	Oat	2 "	10	.377	.54	.0078	.0067	-.0011
3	Bean	3 "	1	.530	.89	.0210	.0189	-.0021
4	Bean	3 "	1	.618	1.13	.0245	.0226	-.0019
5	Oat	2½ "	4	.139	.44	.0031	.0030	-.0001
6	Lupin	1½ "	2	.825	1.82	.0480	.0483	+ .0003
7	Lupin	2 "	6	2.202	6.73	.1232	.1246	+ .0010
8	Lupin	7 Weeks.	2	.600	1.95	.0349	.0339	-.0010
9	Lupin	6 "	1	.343	1.05	.0200	.0204	+ .0004
10	Lupin	16 "	2	.685	1.53	.0399	.0360	+ .0006
11	Dwarf Bean	2 Months.	1	.792	2.35	.0354	.0360	+ .0006
12	Dwarf Bean	2½ "	1	.665	2.80	.0298	.0277	- .0021

It will be seen that in the majority of cases the analysis of the materials showed a slight loss of nitrogen, in a few cases a slight gain. But it was quite certain that under the conditions of Boussingault experiments the plants had not assimilated atmospheric nitrogen.

Georges Ville was another experimenter who at this time endeavoured to answer the same question as to the power of plants to assimilate atmospheric nitrogen. He employed much larger vessels, considering that Boussingault's gla

sphere was too small for the purpose. The results he obtained were uniformly the reverse of those of Boussingault and pointed to the conclusion that plants do assimilate free nitrogen. At the same time, it is to be noted that Cloez, who was deputed by the French academy to examine Ville's method and apparatus, found that free ammonia was either present in the glass house in which the plants grew, or was introduced in the air supplied.

Ville had objected to the comparatively small vessels of 15-20-gals capacity which Boussingault used in his experiments. Boussingault therefore supplied a small quantity of salts of ammonia or nitrates to the soil in his spheres, and showed that the plants then grew perfectly well in the confined space, thus proving that his apparatus was not at fault. In addition, he repeated his former experiments, without any supply of combined nitrogen but with a liberal one of air purified from nitrogen compounds, and showed again that there was no material gain in nitrogen to the plant; but the developed plant contained merely the nitrogen which the seed contained.

At this time Lawes, Gilbert, and Pugh also attacked this question at the Rothamsted agricultural experiment station.

I cannot here give full details of the apparatus which they employed, but will set out generally what were the conditions of the experiment. Under a large glass shade, a small pot containing ignited and washed soil or pumice, was placed to grow the plant in. Seeds of known weight and composition were planted in this soil, and the pot placed on a toneware stand. This stone had a groove on its upper face, filled with mercury and the glass shade fitted into this. Thus communication with the outside air was cut off. A supply of purified air was admitted to the glass shade by a tube which passed through the mercury. Water was also supplied to the pot in a similar manner, and an exit for air was similarly provided. Thus a perfect control of the air supply was maintained. The air was purified from nitrogen compounds by passing through concentra-

ted sulphuric acid and by passing over pumice moistened with the same. From nitric acid the air was purified by passage through solution of sodium carbonate. A special supply of carbon dioxide was likewise provided. The series of experiments, which lasted from 1857 to 1860, were most exhaustive: the plants grown belonged to the natural orders, leguminosae, gramineae and polygonae. In one set no combined nitrogen was supplied at all, in a second set, known weights of nitrogen compounds were supplied in the soil. The result was uniformly the same. There was found in the plants just about the same quantity of nitrogen as was supplied in the seed, or in the seed and ammonium sulphate; the gain and losses amounted a few milligrammes only, and this was admittedly an amount which could legitimately be referred to errors of experiment.

*Lawes' and Gilbert's Earlier Results.*

NITROGEN.				
	In seed and manure (if any).	In plants and soil.	Gain or Loss.	
<i>With no Combined nitrogen beyond that in the seed sown.</i>	Grams.	Grams.	Grams.	
Gramineae Wheat 1858 ...	·0078	·0081	+ ·0003	
Leguminosae Peas 1858 ...	·0188	·0167	— ·0021	
<i>With combined nitrogen in addition to that in the seed</i>				
Gramineae Wheat 1858 ...	·0548	·0536	— ·0012	
Leguminosae Peas 1858 ...	·0227	·0211	— ·0016	

The question was not, however, allowed to rest. There was a very generally expressed opinion among British farmers, that clover crops not only produced an excellent crop of most valuable hay, but that in addition they seemed to have enriched the land for a succeeding crop of wheat or barley. Moreover, although the exact experiment of Lawes, Gilbert and Pugh, to which I have just referred, had given a negative result, still, both Lawes and Gilbert and Voelcker in England and others, such as Ber-

thelot and Hellriegel on the continent, admitted that the question was not yet fully solved. Also some of the English field experiments indicated pretty definitely that the opinion held by the British farmer was correct.

Berthelot in 1876 expressed the opinion that the conditions of the Rothamsted experiments were unsuitable as they prevented electrical action, which he maintained was necessary or desirable, and further that, in making such experiments, the conditions should not be such as to exclude the action of micro-organisms.

Hellriegel was the next worker on this subject who obtained results of importance.

In conjunction with his colleague Dr. Wilfarth, Hellriegel, who experimented for more than a quarter of a century on plant growth in its many phases, had gradually brought his method of sand cultures to great perfection. In 1883, these two investigators, who were then at the experiment station at Dahme and afterwards at Bernburg, carried out a series of investigations on the relation which exists between the amount of plant food in a soil, and the weight of crop obtained. In experiments on the nitrogen supply, for example, plants were grown in sterilised sand containing no nitrogen, but with a liberal supply of other foods, such as potash, lime, magnesia, phosphoric acid. In a series of such pots, one pot would contain no combined nitrogen, the second pot a small amount of combined nitrogen as sodium nitrate, the third twice as much, the fourth four times as much and so on.

It was found in the case of members of the Nat. order, gramineæ and some others, that the weight of plants produced, depended largely on the amount of combined nitrogen supplied, that for instance one might expect to obtain wheat plants of twice the weight from pot No. 3 and four times the weight from pot No. 4 as from pot No. 2.

In the case of plants of the nat order leguminosæ the results were different, and the yields varied. Further, and this was the most striking feature of the case, in a series where pea plants

had been sown in sterilised sand with no artificial supply of combined nitrogen, although the growth of most of them was limited to the amount of combined nitrogen in the seed, in several instances the pea plants suddenly commenced to grow luxuriantly. An examination of the roots of the stunted peas, and of the luxuriantly growing peas, revealed the fact that, whilst those of the former were like the roots of most of the higher plants, those of the latter had developed on them numbers of nodular protuberances. Hellriegel and Wilfarth now raised the question whether this peculiar phenomenon was in any way associated with the action of what are known as micro-organisms.

This term is probably familiar to my readers. They probably know that it is applied to a very large class of living organisms which are extremely minute. How animate they are would be difficult to realise. Putting it popularly 20 or 30,000 of some of these small organisms when placed side by side, would measure one inch. In many cases they are apparently extremely simple in their constitution. The larger plants, with which we are accustomed to deal, are composed of vast numbers of small cells; these simpler forms of life frequently consist of a single cell.

Whilst we know a good deal of how the large plants obtain their food, of the economy of the life of these smaller organisms we know but little. It is indeed practically impossible for me to explain to my readers properly very much about them.

But if they are small they are correspondingly numerous. Although they go popularly by the name micro-organisms or "microbes," they will in the future be classified under a number of head or groups, as is the case with the larger plants.

Although they are possessed of an apparently very simple structure, some varieties are probably performing an extremely useful work. They are present everywhere in nature, in the air and in the soil.

Finally it may be added that if some of them are inimical to man, such as the plague bacilli, others

are most useful, and neither we nor the larger plants could exist without their assistance.

To return now to Hellriegel and Wilfarth's work. They next prosecuted their enquiry under such conditions as would exclude, from certain of their cultivation pots, all such organisms; to some of their cultivations they supplied them. Feeling certain that, if the nodules on the roots of the leguminosae were to be referred to the agency of some one or other minute organism, such organisms must have their location in the soil, they supplied certain of the pots of sand with a small volume of the muddy water which is obtained by shaking soil with water, and allowing the sand to settle.

They then found that whilst the leguminosae would not grow under sterile conditions, those plants to which the muddy soil water was added, grew luxuriantly, and a large gain of nitrogen took place. Secondly, they proved that the luxuriant growth was to be referred to the agency of some particular class of minute organism in the muddy water in this way. These micro-organisms, like all plants and animals, can be readily destroyed. Just as we or the plants of our fields would immediately die if we were placed in boiling water, so it is with these small things. If placed in boiling water they are killed. Hellriegel and Wilfarth, therefore, before adding the muddy water to some of the pots, boiled it, and then under these altered conditions, the leguminosae could no more flourish than when grown in the pots of sterile sand, containing no compounds of nitrogen.

A word may here be added regarding the mode in which Hellriegel and Wilfarth conducted their experiments. I shall not enter into this in detail, but will confine myself to a brief description of the essential features of the experiments.

As I have already said, the cultures were conducted in pots of sand. This sand was first cleansed from all compounds of nitrogen and was then heated to 150°C for sometime. The pots and implements used for filling in the sand, were likewise sterilised. The mineral foods were supplied as solutions

and mixed with the sand before filling into the pots. Finally the surface of the sand was protected by cotton wool. The plants were then grown under exclusion of those micro-organisms which in some way or other assist the leguminosae to assimilate atmospheric nitrogen.

*Examples of Nitrogen Assimilation.*

	Nitrogen in sand and seed.	Nitrogen in sand and plant.	Gain or Loss.
<i>Hellriegel and Wilfarth.</i>	Grams.	Grams.	Grams.
Pea ... ..	·0084	·2335	+ 2251
Oat ... ..	·0010	·0033	+ 0023
Buckwheat ...	·0007	·0006	— 0001
<i>Lawes and Gilbert.</i>			
Peas ... ..	·1297	·6335	+ 5038
Peas ... ..	·1290	5205	+ 3915

Hellriegel and Wilfarth have carried out a long series of experiments with plants of several natural orders, and the results may be summed up as follows:—members of the gramineae, cruciferae, chenopodiaceae, do not assimilate atmospheric nitrogen. Members of the sub-order papilionaceae (Nat order leguminosae) do assimilate atmospheric nitrogen, if certain micro-organisms are present in the soil.

This work of Hellriegel and Wilfarth was published in 1886. Since then Lawes and Gilbert have repeated the experiment, and have entirely corroborated their results.

A further point was next experimented upon by Hellriegel and Wilfarth, namely, to prove that the nodules or tubercles of the roots of the papilionaceae are due to inoculation. The growth of the roots could not be observed in the sand cultures, therefore they availed themselves of what is called "water culture." This method consists in growing plants in a dilute watery solution of plant food, instead of in soil or sand.

In order to test the question at issue, peas were germinated in water and allowed to grow until a couple of leaves had developed. Plants possessing two well-defined roots were selected from the



number which had germinated. These were then placed in a vessel which consisted of two distinct parts. Two glass cylindrical vessels were placed together, and each was filled with suitable cultivation medium containing no combined nitrogen. A pea plant was then fixed over the edge of this double vessel in such a manner that one of its roots was immersed in one cylinder A, while the other root was immersed in the other cylinder B. Some muddy soil water was now prepared and a definite quantity was added to A. The same volume of the muddy water was then boiled for half an hour to sterilise it, and this was added to vessel B. For some days no change was apparent in the plant, but in about 10 days a change set in, and tubercles began to form on the root in vessel A which had received a supply of 'fresh soil water, whilst the root in vessel B, to which the *boiled* muddy water had been added, was destitute of these nodular protuberances. This experiment was repeated on several plants with uniform results.

It will now be readily apparent why in Bous-singault's experiments and in the earlier ones of Lawes and Gilbert, although they knew nothing at that time of the part which the soil organisms play in the question, their beans and peas would not assimilate nitrogen. In purifying their soil materials, they had heated them in order to get rid of the last traces of organic nitrogen, and had thus sterilised them. And now that we know that these particular organisms are usually present in soils, and perhaps also in dust, we can understand that, although in Bousingault's glass globe, he doubtless admitted such organisms as the air contained, he would not have those soil organisms in which has been found an explanation of the assimilation of nitrogen by papilionaceæ.

Leaving for the moment the question of the assimilation of atmospheric nitrogen by plants, I must turn to some work which has engaged the attention of two men, namely Nobbe of Saxony and Winogradski. From the nodules of the papilionaceæ, these bacteriologists have separated an organ-

ism or organisms. I shall not attempt to enter upon any details of the discussion as to whether there is only one organism concerned or a whole family of them. But Nobbe having separated them, has grown them in the pure state and has placed them on the market in suitable vessels, so that if a soil happens to be destitute of these most desirable forms of life—and I may add that such soils apparently exist—they can be readily supplied to the agriculturist. The material including the growth of micro-organisms is sold under the name "Nitragin." Regarding its practical utility I believe that the information at hand is insufficient to form an opinion upon.

Returning now to the main question of the assimilation of atmospheric nitrogen by the higher chlorophyllous plants, it has been seen that formerly Bousingault, and Lawes and Gilbert and others maintained that nitrogen was not directly assimilated; others such as Ville and Bethelot maintained that it was; then Hilfrigel and Wilfarth demonstrated that in the presence of certain bacteria, the papilionaceæ do assimilate free nitrogen, but that plants of certain other natural orders do not, a result which has been amply corroborated by Lawes and Gilbert.

There are, however, those who still maintain that assimilation of atmospheric nitrogen is proceeding through other agencies than the growth of papilionaceæ in conjunction with micro-organisms. Bethelot and Schloëssing and Laurent have found a gain of nitrogen in soils, both in the absence of higher vegetation as well as in conjunction with it. Frank has attained similar results, but these have been uniformly obtained in the presence of certain algæ and lichens. Thus it is most important when speaking of the question of the assimilation of atmospheric nitrogen by plants to be careful to note what plants have been included in the experiments. Briefly, it is pretty certain that among our field crops, only the papilionaceæ utilise free nitrogen, whilst most of the others do not. It is also probable that some of the

lower forms of life such as algæ and lichens, whether independently or not is not known, do assimilate free nitrogen. But the parts which the plants of the many other natural orders play in relation to nitrogen has still to be determined. In India there is certainly one class of plants, namely the mimosæ (Natural order Leguminosæ) which grow very extensively and which may or may not be able to take part in this most important chapter of agricultural economics. It is one of the many questions which remain for future solution in India.

The question has naturally been asked "In what way do these bacteria assist certain plants to assimilate atmospheric nitrogen?"

This question is very clearly set out by Lawes and Gilbert in a paper which they published in the Journal of the Royal Agricultural Society of England, third series Vol IV. pp. 657—720. They put it thus :—

"The alternative explanations of the fixation of free nitrogen seem to be :—

1. That under the conditions of the symbiosis, the plant is enabled to fix the free nitrogen of the atmosphere by its leaves.

2. That the nodule organisms become distributed within the soil and there fix nitrogen; the resulting nitrogenous compounds becoming available as a source of nitrogen to the roots of the higher plant.

3. That free nitrogen is fixed in the course of the development of the organisms within the nodules, and that the resulting nitrogenous compounds are absorbed and utilized by the host.

A definite answer to this question has not yet been found, but the third suggestion seems to be the most likely. In the first place it is regarded as highly improbable that the functions of the leaves of these plants are materially modified by the presence of the nitrogen fixing organisms in the roots. The experiments have proved that if we grow papilionaceæ in a soil, destitute of these organisms, but to which a supply of combined nitrogen, such as a nitrate, has been added, they develop normally, but no fixation of atmospheric nitrogen takes place. If, when growing in symbiosis with these nodule organisms and assimilating nitrogen, the leaves were taking any direct

part in the work, we should expect to find some visible sign of the changed state in them. This is however not the case. Secondly, if it were simply a case of the nodule organisms, living in the soil, assimilating nitrogen and forming nitrogen compounds which the higher plant could utilise, then why should not wheat or maize be able to utilise such compounds? Moreover if this were the case, we ought to find an accumulation of nitrogenous compounds in the soil at the conclusion of the experiment. The experiments have shown that this is not so. If at the end of the experiments, the whole of the plant roots be very carefully separated from the soil, the latter contains no more nitrogen than it did at the beginning, and that the whole of the accumulated nitrogen has gone to build up the plant including of course the root-tubercles.

We are therefore led to conclude that when these particular organisms grow in *symbiosis* with the papilionaceæ, they are in some way enabled to assimilate atmospheric nitrogen, build up nitrogenous compounds in the roots and deliver these over to the host plant.

I should not like my readers to misunderstand me when I say that the experiments have gone to show that the soil does not gain any nitrogen during this process. We must be careful, for it has been popularly stated that these leguminous plants enrich the soil. So they do. But the gain is an *indirect* one. In this first instance the soil gains nothing. Later, however, when the crop is harvested, the roots which contain a proportion of the assimilated nitrogen, die down and go to form humus, which in its turn becomes available to other crops such as cereals.

From the purely scientific aspect of this question, I wish to turn to the more practical one, namely "in how far does this assimilation of atmospheric nitrogen by leguminosæ, and may be by other and smaller plants such as algæ, affect practical agriculture?" After learning that some plants at least take part in this process, you may be apt

to say "O then, since all these pulses which we grow in our fields with other crops are constantly assimilating free nitrogen, the supply of that element for the other crops is constantly being replenished and we need no longer trouble about preserving our cattle manure; we may as well burn it as fuel and put the ashes on the land." Now this would be, to say the least, to jump to a very hasty conclusion, and I may add that it would be a very dangerous one. It is true that through the agency of these pulses the land becomes to a greater or less extent enriched for a succeeding cereal or millet crop. As to this there can be no doubt. The experiments which have been carried on at the Cawnpore Farm in relation to this question have shown quite conclusively that the root residue from a pulse crop enables us to obtain an increased wheat crop. But that increase is not large and only amounts to about 100 lbs of grain or 10 per cent. more than is obtained from land to which no manure has been added.

The similar experiments at the Nagpore Farm on Black Cotton Soil have shown a still smaller increased outturn. I am of opinion that the Nagpore experiments have been interfered with by causes upon which I shall not here enter. But I prefer to allow that the Cawnpore experiments illustrate fairly the probable truth. Doubtless an increased outturn of 100 lbs of wheat or millet is most acceptable in India. Doubtless too, the part which the pulse crops of India are playing is an all important one. But when we turn to the effects of other manures, whether it be cattle manure or salt-petre, we find that very much larger yields are obtained, than those from the mere growth of pulses. Six tons of cattle manure doubles the outturn of wheat at Cawnpore and 3 maunds or 240 lbs of salt-petre gives a crop half as large again as that obtained from unmanured land.

Finally, we have the fact which is uncontroversial, namely that although in the agricultural practice of India unusually large quantities of pulse crops are everywhere grown, and have doubtless

been grown for a very long time, the soils are generally very poor indeed in nitrogen; and this leaves only one conclusion to be drawn, namely, that although our pulse crops are annually assimilating some nitrogen from the atmosphere, the amount so brought into combination within the soil is not sufficient either to increase materially the store of this all important plant food, or even to maintain it at a high level. Possibly to the agency of these pulses may be due the fact that the crops are as good as they are, and that without them, the food supply would be very much less. But this is I fear all that can be placed to their credit. There are various other aspects of this question of supply of nitrogen to our food crops. I cannot however enter upon them to-night. But one thing is quite certain, namely, that the high yields of cereals which are obtained by European farmers, as compared with those obtained by the Indian ryot are not altogether to be explained by different conditions of climate.

It is true that in Europe long draughts accompanied by intensely hot weather do not form an annual feature of the agricultural year, but on the other hand in Europe the ripening grain is very frequently laid by rain, or drenched after it is cut; the hay is as often damaged from the same cause, and the root crops may be simply eaten up by insects or succumb to the disease called "finger and toe" as completely as crops are sometimes cleaned off the fields by a flight of locusts or an attack of rust in India. The crops of both countries are liable to very serious damage. But it has nevertheless to be admitted as a fact that in those countries where most attention is paid to the manure heap, there do we find by far the largest yield of crops per acre. And I have no hesitation in saying that if the Indian ryot conserved his cattle manure as carefully as his European compeer does, he would at least realise very different outturns of grain than is at present the case.

J. W. LEATHER.

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## THE INDIAN COURTS UNDER VICTORIA.

IN addressing the learned Judges of the High Court of Madras in response to the eloquent tribute which Chief Justice Sir Charles White paid to the memory of the late Queen-Empress, Sir V. Bhashyam Aiyengar very appropriately referred to the establishment of the High Courts in India as one of the most beneficent acts of Her late Majesty's reign. It is impossible to speak, at the present day, of the administration of justice without connecting it with the High Court. The High Court has come to be associated in the minds of the people with all that works for good, for even-handed justice and for impartiality. It is the one machinery to which all eyes turn whenever there is executive intolerance or magisterial high-handedness. The rule of Great Britain in India has been fruitful of innumerable benefits to the people of this country; and varied and many have been the agencies which have worked for this end. But no one institution has contributed so much to the stability of the empire and to the contentment of its population as the High Court in India. It symbolises, in the imagination of the people, everything that is good in English rule. One might not inaptly say that the establishment of the High Courts has settled the constitution of the administration of justice in this country. No doubt there has been legislation since the Charter Act of 1861 which has affected the jurisdiction of the courts in some respects. Reference will be made to them later on. But the central fact in the history of judicial administration in this country was the grant of the Letters Patent in 1865 by which the various High Courts were established in the Presidency towns.

I propose to deal very briefly with the machinery for the administration of justice which existed prior to the year 1837 when Queen Victoria assumed the reins of sovereignty.

I will then refer to the courts of justice which existed between 1837 and 1865. Thirdly, I will allude to the changes in the constitution of the courts between 1865 and 1900. I propose, lastly, to indicate in what respects legislation is desirable to effect some salutary reforms in the existing machinery.

The present constitution of our courts and the evolution of the principles of law which guide and control the judge in administering justice among the various classes of British subjects in India have cost much professional labour and skill. It is no doubt true that there was no conflict of authority in India between the Common Law and the Equity Courts as in England, but we had the unedifying spectacle of the Executive Government, and the Supreme Court fighting with each other as to which was to be supreme in the land. There was no question in this country, as in England, regarding the classes of suits which a particular tribunal should take cognisance of. But there were and have been in India different classes of population to whom different systems of law applied. There were the Indian subjects to whom their special laws were administered in the courts of the Mogul Emperor, and there were domiciled Europeans who claimed to be governed solely by English laws and usage. Thus it came about that immediately after the establishment of the British power in India and for a long time after, there was no uniformity either in the laws that were administered to the various peoples of the country or in the tribunals to which recourse had to be had for the redress of wrongs. The Prime Minister of England said last year that half the international complications were attributable to missionary zeal. He might with equal justice have added that the other half of them were due to merchants and traders. Whatever may have been the causes that led to empire-building in other parts of the world, it is to the merchant that the suzerainty of the British sovereign over India owed its inception and development. It was to a Company of merchants that was granted the charter in 1601 by Queen

Elizabeth to make laws and constitutions for regulating the dealings as between themselves and themselves and their native constituents. English laws and institutions have since then gained such a strong footing in this country and have assumed such vast proportions that it is impossible to mention any branch of the Indian law which has not been profoundly affected by the principles of British Jurisprudence. The growth and development of the Indian law bears a strong resemblance to that of the *jus gentium* in Rome. It was the desire to regulate the intercourse between foreigners and foreigners and between foreigners and Romans that led to the publication of the edicts of Praetors. In the end, the *jus gentium* mostly supplanted the civil law of Rome. English law has done the same thing for India. No doubt our laws of succession and inheritance are our own. Even here, ideas have been engrafted and principles have been enunciated which the old law-givers of India would never have acknowledged as being the legitimate deduction from their precepts. As in Rome so in India, the new-comer has left his deep impress upon the laws and institutions of the old country.

The charter of Elizabeth was renewed with additions and alterations by successive sovereigns of Great Britain. Until the year 1637 when James I. authorized the formation of Municipal Corporations, there were no regular courts. In Madras there was the Choultry Court composed of the customer, the Mint Master and Pay master, which administered a kind of justice. In 1678, in addition to the Choultry Court, the court of the Agent and Council of Madras was established which had both criminal and civil jurisdiction. As I said before, it was in 1687 that real steps were taken for the establishment of courts of justice. In that year, the East India Company established a Municipality for Madras which consisted of a Mayor, Twelve Aldermen, and sixty burgesses. The Mayor and the Aldermen had civil and criminal jurisdiction entrusted to them, and were assisted by a Recorder

and a Town Clerk, both learned in the law. The charter of William III granted in 1698 was very important in many respects, but in the matter of the establishment of courts of justice, it effected no special reform. From the year 1698 until the middle of the eighteenth century, there was no change of any importance in the machinery for the administration of justice. The charter of 1726 reconstituted the Mayor's courts and provided for an appeal from their decisions to the Governor-in-Council, and for a special appeal to the King-in-council in important cases. The subsequent charter of 1753 introduced no substantial reform. That charter declared that the Company had no power over the native unless they submitted themselves to the jurisdiction of the Mayor's courts.

The year 1757 which witnessed the memorable battle of Plassey gave a new turn to the powers and prerogatives of the Company. From being a mere trading Company always anxious to obtain the best of terms for the sale of their merchandise, the Company became a military power. Under the genius of Lord Clive, the military achievements of the Company left it without a rival in the field. Territorial acquisitions were made on a large scale and the man who won Plassey for England became the first Governor of England's Indian possession in the year 1765; and from 1765 opens a new chapter in the history of British rule in India. Lord Clive was not content with Plassey. His ambition was to establish an Indian Empire for England. Consequently when he returned in 1765 with plenary powers from the Court of Directors he obtained from King Shah Alum a *Firman* by which the Company was empowered to administer the revenues of the country. The *Diwani* was granted to the Company, and the Company became the *Divans* or agents for the collection of revenue. But the collection of revenue meant the adjudication of civil disputes regarding its assessment &c.. Thus by the grant of the *Diwani* the entire civil administration passed virtually

ally into the hands of the Company. The criminal administration was still in the hands of the Nabob.

The next important stage in the growth of the Indian courts owes its initiative to Warren Hastings. The genius of the military commander had firmly established the prestige of England in India. It was reserved to the first civilian Governor-General to constitute on a firm basis the civil and criminal administration of the country. By the resolutions of the Council passed in 1772, Collectors were recommended to be established all over the country with native Diwans as assistants for the collection of revenue; and the Collector was to become the judge of the *Diwani* in each Collectorate. The Court of the *Diwani* was to settle all civil disputes. The Foujdari courts were to decide criminal cases. The presiding officers of the latter courts were to be persons learned in the Mahomedan law. Recommendations for establishing a central court for hearing civil appeals the Sadir Diwani Adalat—and another for hearing all criminal appeals—the Sadir-Nizamut Adalat—were also made. Apparently the attention of the House of Commons had by this time been drawn to the very imperfect machinery which existed in India for administering justice and to the absence of safeguards and control over its administration by the Company's servants. It was felt that it was no longer desirable that a company of traders should control the judicial administration of the country. What has long been known in Indian legal history as the Regulating Act of 1773 was passed by the House of Commons which had the recommendations of the Governor-General before it. The Adalat and Naizamut courts were established to hear appeals from the mofussil courts. These courts were to be under the control of the Company. The old Mayor's courts whose territorial jurisdiction was confined to the Presidency towns were unable to cope with the work which accumulated in the principal centres of Government. The residents in these places claimed to be governed by the Laws of England.

Hence the Supreme Court was established by the same act in Calcutta. Mr. Ilbert in his book on the Government of India thus summarises the changes introduced:—

"The Supreme Court was empowered to exercise civil, criminal, admiralty, and ecclesiastical jurisdiction, and to appoint such clerks and other ministerial officers with such reasonable salaries as should be approved by the Governor-General and Council, and to establish such rules of procedure, and do such other things as might be found necessary for the administration of justice, and the execution of the powers given by the charter. The court was declared to be at all times a court of record and a court of oyer and terminer and jail delivery in and for the town of Calcutta and factory of Fort William and the factories subordinate thereto. Its jurisdiction was declared to extend to all British subjects who should reside in the kingdoms or provinces of Bengal, Behar, and Orissa, or any of them, under the protection of the United Company. And it was to have full power and authority to hear and determine all complaints against any of His Majesty's subjects for crimes, misdemeanours, or oppressions, and also to entertain, hear, and determine any suits or actions whatsoever against any of His Majesty's subjects in Bengal, Behar and Orissa, and any suit, action, or complaint against any person employed by or in the service the Company or of any of His Majesty's subjects."

But on this jurisdiction two important limitations were imposed:—

First, the court was not competent to hear or determine any indictment or information against the Governor-General or any of his council for any offence, not being treason or felony, alleged to have been committed in Bengal, Behar, or Orissa. And the Governor-General and member of his Council were not to be liable to be arrested or imprisoned in any action, suit, or proceeding in the Supreme Court."

Although the Regulating Act of 1773 contained all these provisions, it was not until the year 1774 that all these recommendations were embodied in a charter. Calcutta had its Supreme Court under that charter, but Madras and Bombay had long to wait for their Supreme Courts. The Mayor's courts established in 1753 existed in these two places till they were replaced by what were known as the Recorder's courts, in 1797. Practically, the Mayor's Court was reconstituted by the addition of the Recorder, who was appointed by the Crown. To Madras relief came sooner than to Bombay. It had its Supreme Court by the charter of 1801 while Bombay had to wait till the year 1823. I do not propose to deal here with the struggle between the Executive authorities and the judges of the Supreme Court. They are foreign to my purpose. I may say in passing that the judges in

Madras never seem to have had any occasion for asserting their independence as against the Company's authority. In consequence of the conflict between the powers and the prerogatives of the Supreme Court and of the Executive Council, an Amending Act was passed in 1781 by which some limitations were placed upon the powers of the Supreme Courts. One of the restrictions was to the effect that the Supreme Court should have no jurisdiction in revenue matters, and that court should not interfere with any acts done by the Company's servants in the collection of revenue. One other notable declaration in the Amending Act of 1781 may also be referred to. It was to the effect that nothing said or done in consequence of rules and practices of castes should be held and adjudged to be a crime on the ground that they were not in consonance with the laws of England. It was this harmless proviso reiterated in the gracious proclamation of 1858 that has been construed in some quarters as meaning that no effective assistance should be rendered to eradicate the abuses connected with the administration of our temples and their endowments. I will have to say a few words on this subject later on.

Although the Charter Act of 1793 and the more important one of 1813 introduced some important changes in the political powers of the Company, they introduced no reform in the constitution of the courts. The salaries of the judges were regulated in the years 1825 and 1826 and in the year 1828 certain amendments were made in the criminal law of the country. Then came the Charter Act of 1833. By that Act the powers and functions of the East India Company were considerably curtailed. Parliament had become alive to the necessity of keeping a careful watch over the actions of the Company's servants. Its ultimate responsibility to the good Government of the country was recognised, and an attempt was therefore made to confine the privileges of the Company to the legitimate objects of its formation. An attempt was also made to consolidate the laws

and provisions which were then in force in India and to define exactly the authority and applicability of Acts of Parliament, and of the Acts of the various legislative bodies in the country. The state of the law in India at this time was not dissimilar to what it was in Rome in the days of Justinian. The remedy suggested also agreed in the main. The Ten Commissioners under Trebonian had not more extensive powers than the Commission presided over by Macaulay. Macaulay's Commission was authorised "to enquire into the jurisdiction, powers, and rules of the existing courts of justice &c." It was to the report of this Commission that the codification of some of the branches of Indian law owed its initiative. One of the sections of this Charter Act declared in language similar to that used later in the Queen's proclamation that no native of India shall by reason only of his religion, place of birth, descent or colour be disabled from holding any employment under the Company.

This brief survey of the judicial machinery which existed for nearly 200 years in the early days of the Company's career brings us to the period of the late Queen's accession to the throne. When she assumed sovereignty, the country was still under the administration of the Company. There is no doubt that greater supervision was exercised by Parliament; it is also true that the Company had not the same powers and prerogatives as they had a hundred years before. None the less, the government of the country was in the hands of men whose object was trade and whose ideas of government and justice were colored by consols and dividends. The next and last renewal of the charter in favour of the East India Company was in 1853. In the new charter provision was made for resuming the Government by the Crown whenever it was thought fit to do so. It was by this charter that the appointment of Haileybury-men was put an end to and an open competitive test was constituted the ground of preference. Nothing of any importance relating to the administration of justice took place until the

memorable year 1858, when Parliament passed the measure "for the better Government of India." It will not be germane to my purpose to refer to the political and administrative advantages which the assumption of direct sovereignty by the crown conferred on the people of India. When that assumption was announced in India in the words of the proclamation of 1858, it left no doubt in the minds of the people that a new era was opening before them, and that they were part and parcel of a great and world-wide empire in which personal freedom and equality of justice had taken firm root. The people have since evinced greater confidence in the tribunals which administered justice, and have shown greater regard for the personnel of the administration. The next step of importance was the passing of the Indian Councils Act of 1861. The powers of the Supreme and of the Local Councils were defined. To the Local Councils in Madras and Bombay were restored the power of making laws and regulations which had been taken away from them. But the most important event of the year was the Charter Act of that year. It was by that Charter the constitution of the High Court was settled. In the despatch of the Secretary of State enclosing the Charter Act, the Secretary of State says :

"This Charter will accomplish the great object which has so long been contemplated, of substituting for the Supreme and Sudder Courts abolished by the Act, one High Court of Judicature, possessing the combined powers and authorities of the abolished courts, and exercising jurisdiction, both over the Provinces under the Sudder Court and over the Presidency Town which forms the local jurisdiction of the Supreme Court."

The original and civil jurisdiction possessed by the Supreme Court in the Presidency towns passed to the High Court. The powers of the Sadar Dewani Adalat in respect of appeals from Provincial Courts also passed to the new court. Similarly the right of hearing criminal appeals which the Sadar Nizamat Adalat (sometimes called the Sadar Foujdari Adalat) vested in the High Court. In a way, the jurisdiction and control exercised by three different courts deriving their authority from three different political bodies all merged

in one court. The High Court henceforth represented the entire judicial administration of the country. Sections 9 and 15 of the Charter Act show what extraordinary powers were granted to the High Court; and the High Courts in India have always exercised those powers to the benefit of the subject population. Although the Charter Act was passed in 1861, it was not until the year 1865 that the High Courts were actually established in the various Presidency towns; and these 35 years since that memorable event have been synchronous with greater freedom of the subject, and more integrity in the administration of justice throughout the land.

After the establishment of the High Courts in the different Presidency towns, Local Acts were passed defining the pecuniary and territorial jurisdiction of the Subordinate Courts. — (*Tide Madras Act III of 1873, Bengal Act XII of 1887, Bombay Act XIV of 1869 &c.*) These courts have jurisdiction only to try suits of a civil nature. There are also Revenue Courts whose jurisdiction is limited to settling disputes between landlord and tenant, and to determining the rights of certain persons to succeed to certain Revenue offices. There are Small Cause Courts in the Presidency towns and in the mofussil which summarily dispose of claims for money and the like. Act XV of 1882 for the Presidency towns and Act IX of 1887 for the Mofussil refer to the class of cases and the nature of the jurisdiction which these courts of Small Causes exercise. There are the Courts of the various grades of Magistrates and of the Sessions Judges deciding criminal cases and appeals. In Madras, there is the newly established City Civil Court. The experience of the last 5 years has shown that there was a crying need for such a court as this. It is to be hoped that the experiment which has proved so eminently satisfactory will be followed up by the establishment of similar courts in other centres of Government and by enlarging their jurisdiction. Above all there is the Judicial committee of the Privy Council which is the ulti-



mate court of appeal for India. The late Chief Justice of Bengal, Sir Richard Garth, has given expression to his conviction that this august tribunal has for some time past ceased to command the same respect and veneration which it did half a century ago. It may be open to doubt whether the charge is well-founded and whether the remedy suggested is the right one. It is probable that very soon the constitution of the Judicial Committee of the Privy Council will be thoroughly reformed. The Imperial court of appeal promised to the Australian commonwealth will most likely be the court which will replace the Judicial Committee.

The close of the great Queen's reign left in admirable working order the various courts mentioned above. Sir Courtenay Ilbert in his admirable book on the Government of India refers to most of these courts (see pages 139 and 140).

The nature of the subject I have agreed to write upon gives me no right to say anything upon the nature of the laws administered in these courts. However it seems to me that I am free to indicate my views upon the desirability of maintaining all the existing courts and upon the expediency of establishing new courts to cope with some of the subjects which cannot be satisfactorily disposed of by the existing tribunals.

I have already mentioned that in addition to the ordinary Civil Courts of the empire, there are Revenue Courts. At first sight, it would strike a person unacquainted with the legal history of the courts in India that this bifurcation of tribunals into civil and revenue is altogether unnecessary, if not mischievous. To those that have had anything to do with the administration of justice, the various decisions that have been passed by the High Courts would show that our Civil Courts adjudicate upon revenue matters more often and more speedily and more satisfactorily than the Revenue Courts themselves. They must also have noticed that the Civil Courts are encroaching upon the jurisdiction of Revenue Courts in what are *prima facie* purely

revenue matters. It may not therefore be out of place to enquire into the reasons which led to the differentiation of jurisdiction between a Revenue and a Civil Court and to find out whether their continuance independent of each other is salutary or necessary. These Revenue Courts have a curious history of their own and when that history is studied, it would be abundantly clear that there is absolutely no justification for their separate existence in the present day. They have answered the purpose for which they were devised and there is no need for continuing the anomaly any longer.

When Lord Clive returned in 1765 as Governor and Commander-in-Chief, he determined upon acquiring real sovereignty for England in India. There was a large military force under the Company and the Moghul Emperor was informed that it was necessary to keep up this army in his interests. The cost of maintaining it had to be met, and Shah Alum was induced on the 12th of August 1765 to make a permanent grant of the revenues of Bengal, Behar and Orissa in favour of the Company "*in consideration of the attachment and services of the high and mighty, the noblest of exalted nobles, the chief of illustrious warriors our faithful servants and sincere well-wishers, worthy of our Royal favours, the English Company.*" In Madras, the Nabob of the Carnatic was made to give up the collection of revenue under similar circumstances. The grant was that of the *Dewanny* which meant the right to receive the revenues. But the right to revenue, as I said before, meant the right to settle disputes about its collection and assessment. In fact, it is pointed out that the entire civil and revenue administration of the country passed into the hands of the Company by the *Firman* of Shah Alam. There were Collectors of Revenue in the various sub-divisions, and there were Native Assistants called *Diwans*. Then came the reforms of Warren Hastings and the Regulating Act of 1773. Warren Hastings was unconsciously hoist with his own petard as subsequent events showed. He was very anxious to

reform the judicial administration of the country and he suggested many a change. He advocated the separation of the judicial and revenue functions. Those entrusted with the collection of revenue should have no part in the administration of justice. There was nothing wrong in this. So in 1775 (under the Regulating Act of 1773), the Revenue officials ceased to have jurisdiction over civil disputes, and a number of Native Amils were appointed to decide civil suits. Appeals lay from their decision to the Company's Collectors in the sub-division. The separation was completed in the year 1780 when there were constituted Diwani Adalat Courts in the various sub-divisions which were independent of the Collector. Appeals from these courts lay to the Sadar Diwanny Adalat established in each Presidency town.

I have already referred to the establishment of the Supreme Court by the Charter Act of 1774. It is necessary to bear in mind the terms upon which it was established, in order to understand the conflict between the judges and the Executive Government. James Mill in his History of British India thus summarises the powers of the courts :—

"When the wisdom of Parliament embraced the subject of the Government of India, and by its grand legislative effort, in 1773, undertook to provide, as far as it was competent to provide, a remedy both for the evils which existed, and for those which might be foreseen, a Court of Judicature was created, to which the title of supreme was annexed, and of which the powers, as well as the nomination of the judges, did not emanate from the Company, but immediately from the King. It was formed of a Chief Justice and three Puisne Judges; and was empowered to administer in India all the departments of English law. It was a court of common law, and a court of equity; a court of oyer and terminer, and gaol delivery; an ecclesiastical court, and a court of admiralty. In civil cases, its jurisdiction extended to all claims against the Company, and against British subjects, and to all such claims of British subjects against the natives, as the party in the contract under dispute had agreed, in case of dispute, to submit to its decision. In affairs of penal law, its powers extended to British subjects, and to another class of persons, who were described, as all persons directly or indirectly in the service of the Company, or of any British subject, at the time of the offence."

Then came the memorable struggle between the Supreme Court and the Company's Revenue officers. As pointed out by James Mill, there

used to be distrains for the collection of the rent. The Revenue officers used according to Mill "a simple mode of coercion, adapted to the habits and feelings of the people." But the Supreme Court soon interfered in these proceedings. The moment any coercive process was issued, the aggrieved party sued out a writ of *Habeas Corpus* in the Supreme Court. It is not necessary to discuss here how far the judges were justified in the action they took. One certainly cannot agree with James Mill that the coercion employed was either mild or was adapted to the habits and feelings of the people. Even now, witnesses are available that will bear testimony to the rigour and oppression which the coercive process involved, to the physical torture to which they were subjected to enforce payment of the revenue. One might also say that the milder coercion employed in these days of enlightenment is in itself unsuited to the requirements of revenue collection. However that may be, the judges of the Supreme Court were horrified by the tales of "mild" coercion that reached their ears and they determined to interfere. The appointment of Sir Elijah Impey to the Sadar Adalat, in addition to his position in the Supreme Court, did not mend matters. At last Parliament was obliged to intervene, and by the act of 1781, the Supreme Court was deprived of the jurisdiction of interfering with revenue collections. This is what the Amending Act said :—

"No person was to be subject to the jurisdiction of the Supreme Court by reason only of his being a landowner, landholder, or farmer of land or of land rent, or for receiving a payment or pension in lieu of any title to, or ancient possession of, land or land rent, or for receiving any compensation or share of profits for collecting of rents payable to the public out of such lands or districts as are actually farmed by himself, or those who are his under-tenants in virtue of his farm, or for exercising within the said lands and farms any ordinary or local authority commonly annexed to the possession or farm thereof or by reason of his becoming security for the payment of rent."

No event of any importance happened until the year 1793. Lord Cornwallis had then been six years in office and it struck him that this union of the executive and the revenue functions in the same official was anomalous. He

felt that the officer who was responsible for the collection of the revenue should not have the power to adjudicate upon the disputes regarding its levy and realisation. The preamble to Regulation II of 1793 explains the object which the Governor-General had in view :--

"That while the Collectors of the revenue preside in the courts of Mhal Adalut as judges, and an appeal lies from their decisions to the Board of Revenue, and from the decrees of that Board to the Governor-General in Council in the Revenue Department, the proprietors can never consider the privileges which have been conferred upon them as secure. That exclusive of the objections arising to these courts, from their irregular, summary, and often *ex parte* proceedings, and from the Collectors being obliged to suspend the exercise of their judicial functions whenever they interfere with their financial duties; it is obvious that, if the regulations for assessing and collecting the public revenue are infringed, the Revenue officers themselves must be the aggressors; and that individuals who have been aggrieved by them in one capacity can never hope to obtain redress from them in another. That their financial occupations equally disqualify them from administering the laws between the proprietors of land and their tenants. That other security must, therefore, be given to landed property, and to the rights attached to it, before the desired improvements in agriculture can be expected to be effected."

The Mhal Adalut or Revenue Courts were abolished and their jurisdiction was transferred to the Provincial Civil Courts. But the Revenue officers felt aggrieved at such a deprivation of power. It was pleaded that this step weakened their power of collecting revenue, and that unless they had some jurisdiction, over the recalcitrants, the collection of Government revenue would fall into arrear. The same argument was used then that is now employed by those who justify the continuance of the magisterial and executive functions in the same official. It seems strange that those that ask that the Deputy Collector should not be a Magistrate have not thought fit to claim that he should not be a Civil Judge. The same complaint applies to both the cases and the same evil results have followed. But the revenue officers had everything their own way. In the year 1794, it was resolved that in purely revenue cases, the Collector should be asked to report upon the question in dispute by referring the cases to him and that the judge should take that report into consideration. In

1824, power was given to the Collector to decide the cases that were thus referred to him and not simply to send in a report. In 1831, a regulation was passed by which all revenue suits were to be instituted before the Collector, subject to the right of the aggrieved party to go to a Civil Court to question the adjudication of the Collector. In the year 1859 the jurisdiction of Civil Courts was completely taken away in regard to certain classes of suits and the Revenue Courts alone were held competent to decide these disputes. Thus we have a complete system of dual civil administration which has entirely outgrown the reason of its origin. To any person who has had anything to do with the litigation between landlord and tenant, this system of divided jurisdiction will appear to be mischievous and uncalled for. How does the system work? When the propriety of the written agreements between the landlord and the tenant is in question, the proper court to go before is the Revenue Court. But it has been held in Madras (*Title 14 Madras I.L.R.*) that the Civil Courts also have the power to declare what the proper agreement should be, under Section 42 of the Specific Relief Act. Again as no suit for rent lies in a Revenue Court (except in Bengal), the Civil Courts in decreeing the rent have to determine whether the written agreement upon which the suit is brought is a proper one or not. The decision following upon a suit instituted in a Revenue Court is binding only for the year for which the suit was brought. It has not the force of *Resjudicata* as between the parties. In these days when the subordinate judiciary is composed of men who are all natives of India, conversant with the habits and customs of the people over whom they exercise jurisdiction, it is utterly unmeaning that a Deputy Collector or Assistant Collector who combines in himself at least a dozen offices should be held more competent to decide rent disputes between landlord and tenant. Having every hour of the day to deal with executive functions, they have not, in most cases,

the necessary judicial frame of mind to hear patiently and to decide leisurely the matters in dispute. Take again another class of cases in which Revenue Courts have exclusive jurisdiction. The question is whether A or B should be the Curnam or Village watchmen. Departmental rules have been passed regarding the rights and qualifications of the incumbents and their successors. It is no longer a matter of discretion. Is the Deputy Collector better qualified to decide whether A is in the direct line of the previous office holder than the Munsiff whose duty it is every day to weigh evidence and to arrive at a conclusion upon the rights of the parties? The truth is that no serious attempt has been made since the days of Lord Cornwallis to grapple with the question. The differentiation arises, because people have ceased to enquire why there should be this divided control. Before passing a Rent Law for Madras the question of the tribunal before which disputes regarding rent were to be litigated should be resolved upon. The whole system is incongruous and anomalous. A commission might be appointed to enquire into the system of revenue administration (both departmental and judicial) as at present carried on and to settle how far and to what extent the bifurcation of functions between the Civil and Revenue Courts should be continued.

I have discussed the question of the jurisdiction of the Revenue Courts at some length, because in my view their separate existence is calculated to foster unnecessary litigation and leave unsettled many a point of fact and of law which would become conclusive, if there was but one tribunal to decide both revenue and civil disputes. The late Queen's reign was memorable for the many useful reforms effected in the administration of justice. It is to be hoped that the Emperor's reign might signalise itself by the completion of these reforms by consolidating the jurisdiction of the two courts in one tribunal throughout the land. It may also be hoped that what was so near the heart

of Lord Cornwallis will be given effect to by Lord Curzon who, if he once applies his mind to the consideration of the question, will see that the subject is one which needs reconsideration.

One other matter which the new reign will sooner or later be called upon to actively upon enter and to settle is the question of the administration of our religious and charitable institutions. As in the early days of the Saxon kings in England, so in this country there was no distinction during the Hindu sovereignty between ecclesiastical and civil disputes. The same tribunals had both temporal and spiritual jurisdiction. During the Mahomedan period the people were only anxious to preserve intact the institutions themselves. There were no disputes about religious usages among the devotees because they were in the face of a common devriend. There were some Mahomedan rulers who outshone even the Hindu kings in their solicitude for preserving to the people their ancient religious usages and customs. But these were very few. The direct sovereignty by Great Britain was signalled by a declaration of religious toleration. That declaration has been understood to imply the doctrine of leaving alone all religious disputes. Great Britain can ill afford to adopt that attitude. It is responsible for the happiness and contentment of the people of India. It cannot say that it will not assist in settling religious differences because it has no concern with them. The people of this country know of no other authority. They recognise no other jurisdiction. It is believed by many that the indifference of the Government in these matters is due to unwillingness to perpetuate what according to them are superstitious practices. There might have been some justification for the courts being asked in the middle of the last century to confine their attention to questions of a purely civil nature. The Civil Judges being Europeans were most of them unacquainted with the religious usages of the people. Matters have since changed very much. Every subordinate tribunal is now presided over by a native of India who knows and

understands the people, their habits and their customs. Therefore there is no reason for excluding from their cognisance disputes which divide large sections of the people. The only principle known to law in settling these disputes at present is that contained in that comprehensive criminal law of the realm, the Penal Code. The Government in effect tells the disputants, "We do not care to settle what religious precepts and practices you should observe in your temples. So long, as you do not break each other's heads we will sit quiet and do nothing. But the moment any of the provisions of Macaulay's code is infringed we will interfere to send you to a place where there is no religion." This attitude cannot conduce to the happiness of the people. The Government of Great Britain should not shrink from the responsibilities which their position in the country imposes upon them. The principles upon which the constitution of the Ecclesiastical Courts in England rests will show that even if the Regular Courts in India are not to be called upon to express their opinion upon what are purely religious questions, the Government might by an enabling act establish religious tribunals whose duty it will be to decide what particular observances should be enforced, what religious formulæ should be repeated &c. Government need not put itself to any expense in the matter and it may be provided that the salary of the Ecclesiastical Judges should come from the funds of the religious institutions themselves. Sir William Anson in his book on the laws of the constitution points out in what matters English Ecclesiastical Courts exercise jurisdiction.

"The third class includes church discipline and the correction of offences of a spiritual kind. Among these are offences committed by the clergy themselves, as neglect of duty, criminal conduct advancing doctrines not conformable to the article of the church, suffering dilapidations and the like offences. \* \* \* These offences are punished by monition, penance, ex-communication, suspension abingressu ecclesiæ, suspension from office

and deprivation." I know it will be said that the Ecclesiastical Courts in England have no jurisdiction over dissenters and they decide disputes only in the established church. I may also be told that the constitution above referred to cannot apply to India. I may say at once that I have suggested no definite scheme. I have been at pains to point out that religious differences may also be settled by Civil Courts and that the Magistrate should not be the sole arbiter. There can be no difficulty in suggesting a scheme of Religious Court which will answer the requirements of India. If the Government feels disinclined to saddle its Civil Judges with the responsibility of settling rival religious practices, it ought to take steps to constitute a tribunal which will have power and jurisdiction to determine questions of ritual between rival sects. Such a court in the interest of the good Government of the country is urgently called for; and any delay in dealing with the question will not conduce to the prestige and impartiality of British rule in India. The subject requires calm and considerate treatment, and above all the Government must recognise that it has a duty to perform towards the people of India in this respect.

T. V. SESHAGIRI Aiyar.

#### THE UPANISHADS.\*

At a time when the spirit of research in the West has extended to the philosophy of the East, when in the Parliament of Religions in Chicago a Hindu Sanyasi lecturing on the Vedanta was

\* THE UPANISHADS, published by Mr. T. V. Seshachariar, B. A., B. L., M. R. A. S., High Court Vakil, Madras, containing the Text in Devanagari type and an English Translation of it and of Sri Sankarā's Commentary. Vols. I, II and V translated by S. Sitarāma Sastri, B. A., Vols. III, and IV translated by Pandit Ganga Nath Jha, M. A., F. T. S.

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listened to with rapt attention and when the old spirit of regarding Hindu institutions and systems of thought as the relics of a superstitious age is gradually superseded even in go-ahead America by a faith in their wisdom and a spirit of enquiry into their underlying principles, any publication must be welcome in India that would help Indians, Europeans and Americans alike to a correct understanding of the text of the Upanishads, which are the basis of Vedanta. The five volumes before us of their text in Devanagari and an English translation of the text and the learned commentary of the Great Sankaracharya would be useful adjuncts to any student of the Vedanta philosophy. To the Sanskrit scholar it would be a disappointment to miss the Original Sanskrit commentary itself, but perhaps it was considered the books would grow bulky by its inclusion. The translations, however, are close without at the same time losing the spirit of the original. That difficult task has been well accomplished.

"Upanishad" is a general term applicable to about 108 Chapters of the Vedas. Commentators differ upon the etymology of the term; but it is understood generally to mean the part of the Vedas which deals with questions of ontology as contrasted with what is called Karmakandas, which deal with 'rituals and sacrifices' prescribed as efficacious in securing worldly ends.

What is this world? what is its first cause? What is the *Jivatma* or the individual soul? What is the Paramatma or the eternal soul? What are the mutual relations between the world, the individual soul and the eternal soul? What is or ought to be man's mission? or the object of his existence? What is Brahman? How is the knowledge of Brahman acquired? What practices and observances will lead man in the right path and to a proper appreciation of the Brahman? These and other kindred problems are dealt with in the Upanishads. The Dasopanishads or the ten Upanishads are singled out by the Vedic commentators as containing the highest religious philosophy of the Hindu Scriptur-

es. The problems are there solved in the abstract form. They are all interspersed with allegories and parables. There are several other Upanishads such as Ganapati Upanishad, Narasimha Tapanya Upanishad and so forth, each of which is devoted to a particular deity who is said to be the first cause of the world. The Dasopanishads, however, refer to no deity by name but to the Brahman regarded as impersonal and divested of all quality and action, as both the efficient and the material cause of the visible Universe, the all-pervading soul, the essence and spirit of that Universe from which all creation emerges and into which it is absorbed. The philosophy there breathed is sublime in its splendid abstraction. Each of the four Vedas has got its Upanishad, the doctrinal part as opposed to the ritualistic.

In all ages and in all climes, where man has emerged from primitive barbarism, the problems of philosophy have engaged his attention.

In India, above all, metaphysical speculation has been rife from the earliest times and we find in the philosophical systems of India the counterpart of all the most modern and advanced European systems of thought.

The first of these Upanishads in order is the *Isavasyopanishad*. It opens by affirming that the Lord pervades the whole Universe and whatsoever moveth therein, with the exhortation to renounce all desires and not to covet anybody's wealth, for wealth is unreal and nobody's. Ignorance of Brahman and Paramatman is condemned while the duty is enjoined on every one to seek the knowledge of Brahman and realize the oneness of all beings with the Brahman and thus to relieve himself from all perplexity and grief. "That Brahman pervades all, resplendent, bodiless, scatheless, having no muscles, pure, untouched by sin, far-seeing, omniscient, transcendent, self-sprung." He duly allotted to the various eternal creators their respective functions. In the language of Shelley in "Adonais,"

"The one remains, the many change and pass,  
Heaven's light for ever shines, Earth's shadows fly."

The commentator winds up by declaring that the highest result that could be achieved according to the Shastras by wealth of men and the deities is absorption into the *Prakriti* or nature. Up to this is rotation in *Samsara*. Beyond this is the result of the pursuit of knowledge preceded by a renunciation of all desire, *i. e.*, the seeing of the Atman in everything around. The Brahmanas stimulate to activity while the Upanishads draw people to renunciation. This Upanishad concludes with addresses to the Sun and the Air and a prayer to the Godly fire to lead us "by the good path to the enjoyment of the fruits of our deeds and remove the sin of deceit from within us."

In the next Upanishad called Kena, the character of the Brahman is depicted by the preceptor to the inquiring disciple. The knowledge of Brahman cannot be obtained by logical discussion but can only be by study under a preceptor and introspection. The Brahman is observable in the bright intelligence that guides our senses and faculties. "We do not know how to instruct one about it. It is distinct from the known and above the unknown." "It is known to him to whom it is unknown. He knows it not to whom it is known. It is the witness of every state of consciousness." Being itself the knowing principle it cannot stand in need of another knowing principle just as one light cannot possibly require another light. He who knows the highest Brahman becomes Brahman itself.

In the third part of the Kenopanishad there is a story in the nature of an allegory illustrating the nature of Brahman and its superiority to the elements. Brahman won a victory and the Devas took credit for it. Brahman appeared before them. They asked who that great spirit was. The Devas first asked fire to find it out. Fire approached with great conceit but was humbled when it found itself unable to burn a straw placed before it by the great spirit. Likewise next Air was humbled when it could not blow a straw placed before it. Then Indra approach-

ed but the spirit vanished into the air and the goddess Uma appeared and she was questioned by Indra. She gave the answer that the spirit was Brahman and the glory of the victory was Brahman's and not Indra's or the Devas':—Thus Brahman flashed like lightning—it appeared and vanished as the eye winketh. Devotion, self-control and Karma are its pedestals, as also the Vedas and their supplements. Truth is its abode. Truth is freedom from deceit and fraud in speech, mind or deed and will outweigh a thousand sacrifices. He who knows this thus having shaken off all sins, lives firmly seated in the endless, blissful and highest Brahman.

The next three Upanishads, Mundaka, Kathavalli and Prasna contain similar doctrines illustrated from different standpoints, there being in several instances, a seeker after Truth and a Guru who enlightens him.

The Chandogyā Upanishad, a part of Samaveda, describes the several Upasanas or worships by which Brahman can be realized, the several ways leading to the same goal. Some of the Upasanas enumerated are Dahara Vidya or worshipping the Supreme Being in the cavity of the *Hridaya* or heart." 'Antaraditya as in the centre of the solar disc. Prana Vidya as in the breath. Udgitha Vidya as in the syllable *Oum* and so on. The practice of Yoga as prescribed by sage Patanjali has reference to the groundwork of Upasanas in the Chandogyā. It is a special and elaborate study and has to be approached with faith in certain things and a peculiar disposition of the mind and the whole thing cannot be made intelligible in the column of a mere review. The last verse of Chandogyā sums up the situation thus.

"This Brahman declared to Prajapati, Prajapati to Manu, and Manu to his children, one who has studied the Veda at the place of a Teacher, according to the prescribed rule, during the time left, after performing the duties to the Teacher, and having attained his discharge, settled in his house, studying the Veda in some sacred place and has begotten virtuous sons, having withdrawn all his

senses, into the Self, never-giving pain to other creatures, except, at certain specially ordained places and times—one who behaves thus, throughout his life, reaches the world of Brahman and does not return—yea—he returns not.”

The Aitareya Upanishad opens by declaring that “All this was only one Atman at first. There was nothing else active. He thought “I shall create worlds.” The term Atman means in the context that which pervades all. He created the earth, the sky, the waters etc., then he created the Protectors of the worlds. He gathered the Purusha from out of the waters only and fashioned him and brooding over the Purusha he evolved the sensory organs and the limbs and the first man he subjected to hunger and thirst so that he asked the Creator for a place to settle in and eat his food, and food was created. By the generative organs the generations are continued. The man that dies is born again. The soul is immortal.

The Taittiriya is part of the Krishna Yajur Veda. The meditation of Brahman in the form of Vyahritis is explained first and next in the form of Om. The Upanishad then enjoins on man, justice and the learning and teaching of the Vedas. Similarly Truth, Penance, Self-control, Tranquility. Then follow commandments by the preceptor to his pupil, “Speak the truth. Do your duty, never swerve from the study of the Veda. Do not cut off the thread of the offspring after giving the preceptor the fee he desires. Never err from truth or from duty. Nor neglect your welfare nor your prosperity, nor the study and the teaching of the Veda. Be not careless of duties to the Gods and to the Manes. May the mother be thy God. May the father be thy God. May the guest be thy God. The actions that are uncensurable, do such,—none else. Those that to us are good acts, they should be performed by thee—none else. These Brahmins who are superior to us—they should be refreshed by you with seats etc; give with faith; give not without faith; give in plenty; give with bashfulness; give with fear; give with sympathy.

Act like Brahmins who are lovers of virtue, not cruel.”

This is the command, the teaching, the secret of the Veda.

May we say that is the secret of all religions. It would be instructive to compare with this the ten commandments of the Christian Scripture. Regarding Brahma, it is said that “Faith verily is its head, justice is the right side. Truth is the left side, concentration is the trunk, Mahah or the first born great principle is the supporting tail.”

There are several commentaries on the Upanishads, the important ones being by Sankara and Ramanuja, respectively of the Advaita and Vishish-ta Advaita schools of philosophy. The former system says all creation and the Paramatman or Universal soul are one and the same and does not recognise the individual soul. The Universal Soul is the one reality and all the rest is mere delusion. The latter system says the Universal Soul is something apart from which individual souls emanate but into which they are eventually absorbed. We cannot here go into the elaborate ramifications of the discussions of these doctrines but must pause at this point referring the curious reader to the bulky literature that deals with them.

M. KRISHNAMACHARI.

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## HINDUSTANI LITERATURE: AN APPEAL.

As a last resource I venture to ask permission to appeal to the good nature of some of the distinguished contributors to the *Indian Review*, or to one of its many readers, to assist me in a difficulty from which I have been unable to find any escape. The circumstances are as follow:—

I have for many years been greatly interested in everything relating to India. I have studied with delight the venerable records of its prehistoric times in the only form accessible to me, as reproduced in one or other modern European language, and I have read all the books I could lay hands on dealing with Indian affairs from the European standpoint. But interesting as the records of hoary antiquity are, how secondary is their value



as compared with the knowledge of the Indian of to-day, my living fellow-men and fellow-subjects? I take it as indisputable that the best friends of India are those whose primary interest is in the living men, women and children of that land, rather than in Sanskrit roots, or Aryan mythology. Be that as it may, my own interest lies in the living India rather than in that of the past. At last I determined to try and become more intimate with India by learning a native language; in this way I hoped to penetrate into the thought and learn the modes of thought of the people whose history quite fascinates me. I hoped to learn much about their domestic lives, their social and political opinions and aspirations, and not least, how their minds have been influenced by contact with western civilisation, and what fruits have been borne by this last.

So under considerable difficulties, already considerably past the "*mezzo del cammin di nostra vita*."

With no one to advise me what Indian language to select, and without a teacher, I commenced to learn Hindustani. I can now read it with some facility. I have waded through the stories of *Koi Kaha and Kisi Louri*. I have laughed heartily over *Koi Shars* who turned his horse round in the stable and then got all the public to pay to see the great wonder—a horse with his head where his tail should be!—a tale comical enough to be Irish. But I came to want something of a higher class—above all books, magazine or papers which would reflect to me the thoughts and habits of the millions in whom my interest never abates. I had mourned with the four love-lorn Darweshes, and sympathized with *Azad bahkt*. But I wanted something of more living interest. History had taught me something of the primacy of ancient India in philosophy, science, art, and all that indicates a high standard of psychical and physical life. What about modern, living India? What effect have her Universities and colleges had in producing works worth perusal. How are people living and thinking there now? To gratify my wishes I wrote to relatives and friends in India, or who have returned from there, some after many years' residence. I wanted the names of authors and current works in Hindustani or Hindi, on science, art, literature, politics, economics, history,—in fact on any subject which would indicate modern progress. Alas! I might as well have expected to get particulars from Manthara, or Lilavati. The answer of one of my friends who lived 30 years in India, will serve as a specimen—"When I lived there I could of course talk and read official documents, but I never bothered about anything else." I have tried booksellers in every country in Europe, and have begged of the name of an Indian publisher, all in vain. On one

thing every one united, they all recommended the *bahgh-o-bahar* until that book has become as great a horror to me as '*les aventures de Télémaque*' to the British school boy of 30 years ago, that being the only French book ever placed in the hands of a British schoolboy of those days—and he naturally revolted against toiling over a French story concerning Calypso and Telemachus &c., when there were living men and women, and modern things to read about. So '*Telemagne*' has disappeared, but the woes of the 4 Darweshes still constitute the perennial fount where English officials must imbibe a knowledge of Hindustani. Admit it is the best book for that purpose, still surely there is something to come after one has read it. What is the other book? I have ultimately advertised for such books as I have referred to. The result of a week's advertisement in a London paper, most suitable for the purpose, has been one reply, offering me the *Pentateuch* in Hindustani, and Shakespeare's Hindustani Grammar [1818]! and this advertisement has been all over Great Britain for a week!! I am still awaiting, not without much hope, the result of an advertisement in the '*Pioneer*' in India.

Will any sympathetic reader assist me? I feel there must be some others to whom advice such as I want, as to modern Indian books, would be useful and welcome, as well as to myself. Its publication might also stimulate our interest in the subject which can only be of benefit, and is greatly to be desired. Hunter, in his great work, tells me there are four Universities and nearly hundred colleges in India. Are they all "silent sisters"? Have the native professors and students during these last thirty or forty years produced no works on modern science, art or literature, or are they all engaged in groping in the mists of prehistoric times? I have before me a German catalogue of some 3,000 entries on Indian books, but there is not one of them less than 1,000 years old. There are translations and commentaries by the score on Vedas, Upanishads and Yogas. There is a copy of *Charaka Samhita*, the most ancient and authoritative Hindu medical work, complete in 8 tantras advertised for 31 marks. But where are the modern works on Medicine, Hygiene, Bacteriology, Serotherapy etc.? I read the *Charaka Samhita* with the same weird interest. I read about necromancy or the Black Art, but I want something better than curios to satisfy my mind. Are there no modern philosophers in India, where they once flourished? Or are they all content to expound the philosophy of Vedas and other ancient systems and blind to modern methods and attainments? My catalogues and correspondence all deal with the ancient stories of India. Where are the

rising stars? I ask in all humility and in the hope that some one will feel enough sympathy with my interest in India, to at least tell me the names of two or three publishers in India who can send me catalogues of their publications. The stories of modern Indian life by Mr. Steele are eagerly read here. But they are of course Anglo-Indian stories and one must take the native pictures as they are given there. Are there any native artists? I believe they would be quite popular here, if translated—untranslated they should be far more valued by Englishmen who can read them.

Is it not in every way desirable that a deep interest in Indian affairs should be created and maintained among us? How can this be effected when I with every desire to inform myself, and after very great effort to get information, and hear about the best Indian books, magazines and daily papers, have to confess my absolute failure, and I am constrained to appeal to the friendly feeling of some reader of the *Indian Review*?

Experience and common sense tell us that mutual ignorance of feelings and thoughts is the greatest source of estrangement, and even of hostility between nations. While exchange of ideas, knowledge of each other's characters and desires is the best way to develop the ties of friendship and mutual respect. Intercourse by travel is becoming constant now-a-days, even between the most distant countries. Already wintering in Egypt is becoming fashionable in London.

It is but a step further to India. The spread of a knowledge of Indian Literature and art in England, with attractive representations of the beauties of its scenery, so varied and strange, would soon lead to the introduction of eager and interested visitors, and to an expansion of fellow-feeling which is not hitherto been possible.

Apologising for the length of this letter,

I am Sir,

Your obedient servant,

THOMAS WHITESIDE HIME, B. A., M.D.

BRADFORD, ENGLAND, }  
8th March, 1901.

The *Indian Textile Journal Co.* of Bombay have started a new journal entitled *The Municipal Journal and Sanitary Record* whose object, as its name indicates, is to discuss matters relating to sanitation and local self-Government. Politics, literature and industry may be left to the custodians of the daily press and a journal whose sole aim to serve as an organ for intelligent and independent expression of opinion on all municipal questions has probably been a felt want. If the journal will keep up its present promise of usefulness, it is sure to come to a position of prominence and influence.

### The World of Books.

**HINDU MANNERS, CUSTOMS AND CEREMONIES**, by J. A. Dubois, translated and edited by Henry K. Beauchamp, Editor, *Madras Mail*. Second Edition (in one volume) Price Rs. 10.

The Abbé Dubois was a French priest who came to India about 1792 and did mission work for a period of nearly 31 years. Unlike other Europeans the Abbé diligently studied the languages of the people, studied their feelings and prejudices, renounced European dress, society and modes of life and in every way made himself acceptable to the Hindu population. While he was in India, it seems to have been his custom to note down systematically his observations on native society and life. In 1806, the East India Company purchased his Ms. for 4000 star pagodas and it was soon translated into English.

Meanwhile the Ms. had been returned to the author for corrections, additions and excisions and these were, so numerous that it was virtually new. It is this new work which Mr. Beauchamp has translated and presented to the public. The Abbé seems to have been a very remarkable man. His observations on Hindu society and manners bespeak his keen insight and careful study and in general they may be characterised to be sound. But the reader must remember that his observations are upon Hindu society as it was nearly hundred years ago. Since then society has undergone a great change in almost every department of life. Many of the superstitious customs and ceremonies mentioned by the Abbé are now things of the past. The European reader has therefore to be very careful in accepting the Abbé's opinions as true at the present day. A further fact has to be borne in mind. The Abbé was a staunch and pious Christian. He himself confesses that christianity in India has no bright future. He himself was able to convert only a few pariahs, the lowest in the strata of Hindu society. With the Brahmin nothing could be done in the past and perhaps it may be so in the future. We have to reluctantly observe that the Abbé's remarks on Brahmins, the priesthood, caste etc. are the outcome of the desperate hopelessness of his attempt to shed the light among them. Indeed, in many places he is positively unjust to the Brahmin. Historically his views on Brahmins, their rise and growth are unsound. These are important points and we cannot sufficiently criticise them in the limited space at our disposal. We propose to notice the Abbé's great work at length in an early issue.

PROBLEMS IN EDUCATION, *by W. H. Winch*  
(*Swan Sonnenschein & Co.*)

The author of this little book is Inspector of Schools for the London School Board and speaks therefore with the authority of experience. It is a series of six papers suggestive rather than exhaustive. In each some dominant theory or method of education is taken up, and the needed corrective applied. The extreme importance now attached to perception and observation in class-teaching is condemned in moderate language. Also the indiscriminate contempt of *words* and *terms* as such is corrected in an excellent paper of which the last portion may be quoted as typical of Mr. Winch's style. "I appeal to the adult intelligence, which is apt to deprecate the mere naming which little children indulge as mechanical and purely associative, whether it has never found advantage at the sight of some new bird or flower, to enquire and remember the name, even though such name were purely non-connotative. 'Who's that?' as a new man crosses the college court, 'that's X—Y—.' 'Oh, is it?' and one sinks back satisfied. Yet one has learnt nothing we can say in one sense, but in another one has learnt much, for as I have to insist, with what I fear may be wearying iteration, there is now a centre of reference for the precepts and images which make up X—Y—, a bond which tends to prevent him from falling to pieces, and synthesises his varying appearances."

A number of memoranda written in the author's official capacity have been brought together in an appendix. Of these we would select numbers IV and IX as particularly abounding in useful suggestions. But the part of the book that is likely to be of the most practical interest to the Madras teacher of to-day is the paper on the method of studying nature. Those who have read Dr. Wilson's articles on the Madras Matriculation Science will be relieved to find that even in the city of London such dicta as the following have to be laid down in set form:—

i The absorption of verbal description is not science.

ii The observation of a superior person, manipulating difficult apparatus on a platform, is not science, for the understanding of that apparatus is a scientific education in itself.

iii The hasty jumping to conclusions which no logic warrants, for example, that concerning the Indestructibility of Matter in the south Kensington syllabus for Schools is not science.

iv Science is the experimental study of Nature, controlled by ideas, and demanding logical coherence at every step of its advance.

CHINA'S ONLY HOPE: AN APPEAL BY  
CHANG CHITUNG; *translated by Samuel I.*  
*Woodridge (Oliphant, Anderson and Ferrier,*  
*Edinburgh and London.)*

A book from the pen of the greatest Viceroy of China, from one who combines in himself the best culture of the East and the West must be refreshing after the books we have had from European critics of things Chinese. A graduate of the University of Edinburgh, the Viceroy of Honan and Hupch is not so overcome by the glamour of Western science that he could not see any merit in the wisdom of his ancestors. One of the most anti-European of governors, he yet recognises the shortcomings of his countrymen and tells them plainly what it behoves them to do if they want to escape the fates of their neighbours to the South and West. "The only hope" on which Mr. Chang Chi-tung is constantly harping is "that the Chinaman should give up his besetting sin of self-conceit and open his mind to the new influences of the West and add to his practical knowledge which means so much additional power. Even through the translation we yet recognise the oriental and find how far the East is from the West. This is seen most prominently in the Chapter on "Comparative study" which recalls the prolusions of our own befogged *literati*. The writer's faith in the potency of knowledge will appear amusing to those who are aware how poorly the man of mere intellect is equipped to withstand temptation. For, the besetting sin of the Chinaman, Mr. Chi-tung has this naive remedy: "With such attractive objects of knowledge held out to our people, such as the study of the heavens and the earth and all therein, under modern appliances, who would elect to change the day into the night (as the wretched opium-smoker does) and spend his whole life on a divan, by a lamp, sucking a filthy opium pipe." To have penned such a sentence the writer must have had less imagination than Audrey. Elsewhere he shows a statesmanlike grasp of the Chinese situation and shows up the hollowness of the talk of disarmament and peace conferences and refers to International law in a pithy fashion which might enlighten M. A. Desgardins and realise that safety lies for China in following the lead of Japan. With regard to morals and conduct Mr. Chi-tung supposes that there is little to learn from the Western nations and exhorts his countrymen to keep to the old path. But with regard to technical arts they must assimilate the knowledge of the new science and that way alone lies salvation.

THE POLITICIAN'S HAND-BOOK, by H. Whates. (Vacher and Sons, London.)

This book contains a review and digest of the late papers, diplomatic correspondence, reports of royal commissions, select committees, treaties, consular reports and other important affairs transacted during the session of 1901. We have no doubt a book of this description will be welcomed by all sections of the public. The politician engaged in the work of legislation and the journalist will feel particularly grateful to the author for presenting in a convenient form a concise and connected account of several important events and measures. Among other events, the account of the origin, and progress of the South African war is set out in a lucid manner. The chief merit of the book is the publication of several important documents, state papers &c. on questions such as the South African war, the Alaskan boundary dispute, and other documents which are of permanent historical value. There is an excellent index at the end which affords considerable facility for easy reference. We are glad to note that a decent space is allotted to Indian matters. The publishers announce that they would be willing to undertake an Indian edition of the book devoted solely to matters relating to India and viewed from an Indian standpoint, if sufficient encouragement was given. We have no doubt this will be a great boon if accomplished.

BRIEF SURVEY OF BRITISH HISTORY, by Townsend Warner. (Blackie & Son.)

This clear and well-written account of British history is a welcome addition to the number of books already in use in our High Schools. It treats of the national growth and development of England and in telling the story, the author dwells upon almost all the important phases of this development. There is no burdening of the memory of the readers with a multitude of facts, but the significance of those given in the book is pointed out by laying stress on the sequence of cause and effect. The dates are few, only the most important being given, and therefore the book may be useful to the mere examiner. The numerous maps and diagrams, a little personal detail and a quoted sentence or phrase here and there and a clear synopsis at the end of the book greatly enhance the value of the volume.

THOUGHTS FROM RUSKIN. (George Allen.)

This is a lovely little volume and deserves to be in the hands of every lover of Ruskin. The

selections are for the most part of an ethical character and is intended to represent Ruskin rather as a teacher of the good and the true than as a painter of the beautiful. The compiler expresses the hope that the stray passages given may serve as an incentive to readers who are not familiar with the works of the master to explore the sources from which the extracts are derived. We have no doubt that the beginner who takes up this tiny little book will be stirred to read more of Ruskin.

TALES FROM TENNYSON, by the Rev. G. C. Allen M.A. (Archibald Constable & Co. Price 3/6 net.)

Following the model of Lamb's immortal *Tales from Shakespeare*, the Rev. G. C. Allen, Headmaster of Cranleigh School, has put within the reach of all, the story of Tennyson's *Idylls of the King* in plain prose, preserving as far as possible both the letter and the spirit of the late Laureate's work. The author hopes that the tales may effect two objects dear to his heart, one that they may induce the few who look at them to read the "*Idylls of the King*" for themselves, if they have not already done so, and to re-read them if they have; the other that they may awaken some further interest in the legendary history of King Arthur. Books like "*Tales from Tennyson*" and "*Thoughts from Ruskin*" deserve to be read largely by our college students.

TWO WAR NOVELS.\*

No doubt the stirring events of recent history have all produced their crop of fiction, but we fancy that no harvest has ever been so rapidly brought to the sickle as that of present war. We are nothing now a days if not up-to-date and it is therefore not surprising that Messrs. Guy Boothby and Lewis Tracy have seen their opportunity in the universal interest aroused by the South African crisis, nor that the beneficent Colonial Library publishing firm of Messrs. Bell & Sons should have hastened to supply the Indian market with "*A Cabinet Secret*" and "*The Invaders*". These books have much in common. They both relate to what might have been if the continental dislike for England had found active expression, and they are both characterised by that exuberant inaccuracy of imagination that is the stock-in-trade of those novelists of adventure who supply the demand for quantity rather than quality, in fiction.

\* "*A Cabinet Secret*" by Guy Boothby: "*The Invaders*" by Lewis Tracy. George Bell and Sons, London: 1901,


Both novels have ingenious and pregnant themes. Guy Boothby imagines the interference on behalf of the Boers of a powerful International Secret Society. This society successively bores into cunningly devised traps. Sir William Woller appointed to command in South Africa, the Colonial Secretary, the Commander-in-Chief, and a prominent member of the Cabinet, whose reminiscences the novel purports to be, and having assembled these distinguished men on board a steamer, is only prevented in the last few pages from sending it and them to the bottom of the North Sea. Mr. Tracy has an even more brilliant idea. France and Germany combine for the destruction of England fully engaged, as they suppose, with the Boer war. They send into the country by the ordinary rail and steamer routes a body of picked men who conceal a Kaki uniform beneath the overcoats and trousers of civil life and are armed with mauser pistols. Portions of this force concentrate on a given day at different important points like Liverpool, Birmingham & Hull and easily overpowering local resistance make themselves masters of large quantities of military stores, horses and provisions, and destroy railway & telegraphic communication. Later transports land additional troops and the whole of the Midlands is occupied by a strong French and German force. Of course Great Britain is successful in the end. Prodiges of disciplined valour are performed by militia and volunteers and the fleet rises to the occasion, the book ending with the capitulation of the allied armies and the acceptance of humiliating terms of peace.

As we have said, both these ideas are good. But they are poorly worked out. People with time to kill, however, who do not insist too strongly on such matters as grace of style, probability of incident, and subtlety of character-drawing will find both novels readable enough. The "Invaders," we think, a good deal the better of the two. Mr. Tracy has humor and his boy hero, underboots of a Manchester Hotel, would be a taking personage if his exploits were kept within the bounds of human performance. 'Tis pretty to see how the author seeks to conciliate readers of all classes, sailors, soldiers of the regular army, militia, volunteers. Englishmen, Scotchmen, Welshmen and Irishmen, and people of nearly every English county all will find glorious representatives fighting and dying in Mr. Tracy's pages. Even when he has to give the credit of being the first to offer organised resistance to one volunteer regiment he takes care that it shall be that of Burton-on-Trent, disarming envy by thus giving the greatest glory to the town whence flow such copious streams of "glorious beer."

**ARDEN MASSITER** by *W. Barry.*  
(*T. Fisher Unwin.*)

This is a very interesting novel in which the author has poured out his passion for that Italy which is no more. Italy in these pages figures as the ruined Mistress of political capacity. "New Rome! its palaces are of stucco; is not the Holy Father himself a prisoner? The Sacred College were princes, but they are beggars. The monasteries with their altars, vestments, chalices have been put up to auction, robbed from the people that Jews may hunt over their acres." Such is modern Rome and in it everywhere is revolution smouldering. The air is thick with the rumours of secret conspiracies for the overthrow of the kingly rule. 'They have abolished the hangman, but not the assassin' in this strange Italy. Into such a whirlpool of death, the author drops Arden Massiter, an heir to a fortune, fresh from the Universities, ready to fling away his fortune for a dream of socialism. Destiny prepares him for an adventure perhaps laughable, as he says. "He has fallen into a scrape, having started a vendetta in a sort of hiding from the police or the noble order of assassins which it is not known. The *camorra* spreads snares everywhere for him, from which he effects a marvellous escape. He takes refuge in the meanwhile in the castle of Roccaforte, the homes of the Sorrelli, a mediæval stronghold set on the crest of mountains. And here most of the drama is played out. Italy is seething with the passions of a multitude stirred up to revenge by strange terror, stirred up by poverty, squalor and putrefying life of cities.' We move swiftly amidst scenes of a papacy widowed of its territorial power, of the terrible *camorra* and the struggles of an enlightened rule against mediæval madness; and amidst such encircling gloom, one bright ray of love moves—of Costanza, the daughter of the Sorrelli who says to him who brought her love:—"We are ghosts in this ancient house—the last of the Sorrelli with us it will crumble on the mountain side. And do not grieve for me; as neither do I for you.... Hope in the good God who has taught us both what love means, and what its great price."

This is one of a few beautiful books that we commend for their scenes and suggestions, compact with excellent literary craftsmanship.

.....  
**TALES OF TENNALIRAMA**  
THE FAMOUS COURT JESTER OF SOUTHERN INDIA  
By *Pandit S. M. Natesa Sastri, B.A.*  
(*Member of the London Folklore Society.*)  
PRICE—EIGHT ANNAS.  ONE SHILLING  
APPLY TO—S. A. NATESAN & CO., ESPLANADE, MADRAS.

## Books Received.

FISHER UNWIN :

- The Ending of My Day, by Rita ... ..  
Tessa by Louis Becke ... ..

GEORGE BELL &amp; SONS :—

- The Invaders: the story of Britain's Peril by  
Louis Tracy ... ..  
A Bicycle of Cathay, by F. R. Stockton ...  
Street Dust and other Stories, by Ouida ...

GEORGE NEWNES :—

- The Life of a Century ... ..

THE CLARENDON PRESS, OXFORD :—

- The Hindu Manners and Customs, by Abbe  
J. A. Dubois, translated by H. K. Beauchamp.

THE PUBLISHING HOUSE, MOUNT ROAD :—

- A Brief sketch of the History of India for  
Lower Secondary Schools, by D. Lazarus, B.A.

THE TRAVANCORE GOVERNMENT PRESS :—

- Report on the Administration of Travancore  
for 1899-1900 ... ..

GOVERNMENT PRESS, MADRAS :—

- Madras Government Museum Bulletin, Vol. IV,  
No. 1 Anthropology ... ..

UNIVERSITY TUTORIAL PRESS, LONDON :—

- Aeschylus, Eumenides, by T. R. Mills, M.A. ...

HAROLD AND SONS, LONDON :—

- The Man who forgot, by John Mackie ...

HAWBARN AND WARD, LONDON :—

- Paper Work, useful and decorative... ..

VAN SONNENSCHEIN AND CO. :—

- The Industrial Revolution, with a preface  
by F. York Powell ... ..

WATCHER AND SONS :—

- The Politician's handbook by H. Whates.  
The 3rd Salisbury administration by H.  
Whates ... .. 15/

## MALABAR AND ITS FOLK

BY

T. K. GOPAL PANIKKAR, B.A.

PRICE—ONE RUPEE.

APPLY TO G. A. NATESAN &amp; CO., ESPLANADE, MADRAS.

## Topics from Periodicals.

## THE DECAY OF PARLIAMENTARY ORATORY.

The glories of the British Parliament have been sung by many and for a variety of reasons. Not a little boast has there been with regard to its oratory. To the old fashioned race who have been accustomed to regard Westminster "as the academy and the stage of oratory," a perusal of Mr. Alfred Kinnear's contribution on the subject of the "Decay of Parliamentary Oratory" to the April number of Mr. Harnsworth's New Liberal Monthly will be a disagreeable surprise. Though Lord Rosebery has said that nations are built in silence and their addiction to oratory is usually a sign of decadence, still it would be a poor consolation to many ardent admirers of the House of Commons and the Upper House to be told that these ancient institutions are no longer "the academy of eloquence where men speak in heroics," that those great men upon whom the late and present generations have fixed their models of Parliamentary oratory have either wholly or in part vanished, that Parliament is likely indeed to become an object of antiquarian interest at least so far as its reputation for oratory is concerned. Yet these assertions are not made in any slipshod manner. The critic referred to weighs the Parliamentary oratory of our leading politicians in the balance and finds them all wanting. Lord Salisbury, in virtue of his high position, comes in first. Of him we are told that he has left one century behind him and appears to have no nerve for its successor.

He speaks without the least apparent interest in his subject. His voice is pitched in a key so low that he seems to be at times inaudible to the gallery. His bearing it would appear is almost inanimate. He looks pensively upon the table, resting upon the tips of his outstretched fingers. He obviously is pleasantly indifferent to his audience. It is not illness. He should be, as we see him, on the bottom step of the new century, a comfort to any insurance company in the United Kingdom. His voice, which once rolled over the house, a sonorous effective battering ram for the destruction of any defence, however solid or potential, manifestly lacks only the will to prove that its strength is undiminished. But the will appears to have vanished.

In the hands of our critic the First Lord of the Treasury does not fare better. Though he is a man of many charms, still he is without Parliamentary enthusiasm.

With him public life is not a profession. He is stated to be delightful when he puts forth his dialectical attractions. But the favourite mood of the leader of the House is to confine the graces of his mind more generally to the table of a private dinner party. He will give to a platform in Manchester those exquisite trivialties which he

denies to Parliament. He is most serious when the occasion or the place least calls for responsibility. In his House manner few "notes" encourage great expectations. His dentistry is always of a painless variety. Men are quizzed with "acridity or scolded with a well-affected air of anger. But he does not kill, and rarely convinces.

We come next to Mr. Chamberlain.

He is "slim". He can fill the House. The words "Joe's up" are sufficient to empty the terrace on the finest afternoon, in the full flush of the tea hour. Legislators dallying upon the bank of indolence will hasten to the overcrowded bar of the chamber to listen. Mr. Chamberlain is fully conscious of his power to draw. He uses it sparingly and thus nurtures its influence. But he is not eloquent. Rhapsody seldom, if ever, fires a speech of his. He keeps to "business." He does not appeal to the heart as to the emotions. He is a master of political casuistry. His ideals are of the pattern of the Lowther Arcade. He always advertises himself. He pushes his policy as much as a tradesman does his goods. He is a special pleader for the Government. With all this he is not an orator and we are told he would be the first "to reject the soft impeachment."

Sir William Harcourt comes in for praise.

He is a born debater of the heroic mould. Nature has endowed its favourite with the equipment of a great declaimer, in the mood at once of tragedy and of comedy. Figure, face, voice, the inspiration of lofty ideals are his stock-in-trade. Latterly, however, Sir William Harcourt has taken up and adopted a gloomy mood of address. His accent is usually funeral. He approaches even so light a theme as the financial foibles of Mr. Thomas Bowles with a majestic gravity. To a melancholy monotone he adds a note of expression so low that it reaches "the gallery" as the inarticulate moan of muffled despair. Why is this? It is not constitutional, like Lord Salisbury's new style; it comes not from ill-health, or decay, or exactly from intolerance or the fading instincts of controversy. Sir William, as he proved on the War Bill at the close of the Session of 1900, can revive his old and fascinating style—the merciless jester, who kills with ridicule, and the powerful, eloquent exponent of a great policy. He gave us, after many months of his solemn mood, a variant of the older and finer, and, for his Party's use more serviceable style, which won cheers of delight from a quarter where it could not but be recognised as a damaging attack. But we are told an occasional return to their better state in the past, notwithstanding Lord Salisbury and Sir William Harcourt must, sad as the admission is, be classed with the vanishing forces of Parliament.

Turning now to the leader of the opposition. He is stated to possess a pleasant as well as a luminous address. A certain plethoric flatness of expression deprives him of the first grace of eloquence. Of the liberal members of the present House of Commons Mr. John Morley comes in for some faint praise.

He is a stylist capable of much eloquence and of eloquent feeling which appeals to the heart, while his clean-cut arguments are classics in their literary ingenuity. But to realise Mr. Morley's true or fixed powers, one must see the ex-Chief Secretary upon a country platform,

with his back to the wall in the face of a discordant audience.

It is conceivable that in the evolution of parliamentary life, which is constantly discovering opportunities and bringing out men to seize upon them. Mr. Morley may yet become the rallying point of debaters, and be the vogue—the fashion.

At present the complaint against Mr. Morley is that is cold, does not enthuse, does not care.

We come now to Mr. Asquith whose method we are told, is rather like Mr. Chamberlain's, which rises higher on the Parnassus of Principle.

He seldom studies effects; yet his speeches are full of good things. Like Lord Rosebery, he is a skilful phrasist. His note is serious responsibility, but the air of the speaker is professional. When he rises one instinctively hears the rustle of "silk."

We have no space to refer to the criticisms passed upon a lot of other parliamentarians by both Liberals and Conservatives. The conclusion to which the writer arrives at about the future of parliamentary oratory is however not one of despair. "It is not without a promise and time may work a miracle even at Stephen's." But we are warned, however, that, against the possibility of a renaissance in national eloquence "we must set the newer and cynical temperament of the race, which prefers to express itself in the miserable phraseology of the Stock exchange." Here is the writer's conclusion:—

Parliament itself from its character and the nature of its work, can never be absolutely insignificant or purely

The slim-flam temperament, to which allusion has been made is due to the organization of debate rather than to the meagre qualities of those taking part in it. The careful compression which marks debate in the House of Peers is utterly lacking in the House of Commons. In the Upper Chamber discussion is confined to the best men on both sides and as a rule does not cease till the subject without regard to considerations of dinner, is disposed. The dinner hiatus in the Commons is the weakening interlude of every set debate in the popular chamber. A few nights in that House would be better worthy of its name and of the traditions of Parliament, if the leaders of both Houses maintained, by their uninterrupted authority, the logical sequence of a great debate. Here at least is a gleam of temporary reform—the art of making the best of what we have.

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#### SPURIOUS REMEDIES FOR CRIME.

In the *Humanity Review* for April, Rev. Dr. Morison writes forcibly in refutation of the theory that long sentences and severe punishments will diminish the number of habitual criminals. This view was recently advocated in the columns of the *Nineteenth Century* by Dr. Robert Anderson, Assistant Commissioner of Police for the Metropolis, who had said that our present methods of punishment were adopted out of too great a compliance with the fads of humanity-mongers like Howard, Romilly and Sir Robert Peel, that they could excite the

wonder of generations to come, that they were responsible for the increase of offences like burglary and house-breaking, and that hanging and transportation were in times past effectual means of putting a stop to habitual crime. Dr. Morrison refers to the conclusions of a committee of Scotsmen who had considered the matter a few years ago, that the shortening of sentences had nothing to do with the increase of committals to prison, and that to double the duration of the present sentences would not diminish the proportion of old offenders who repeatedly return to prison. To the same effect is the testimony of the 1879 commission on convict prisons and the 1895 Prisons Committee, which went further and affirmed that long sentences are the cause of hardening offenders, and that the life and discipline of the prison extinguish the last hopes of reform and convert the occasional offender into the habitual. The real source of crime is to be found in the adverse social conditions of the general population, chiefly in the slums of the East End and the South of London.

The Medical Officer of the London County Council has reported that more than 800,000 persons in the metropolis live in conditions deleterious to health, decency and civilisation. The Royal Commission of 1884, in a report signed among others by the present Prime Minister and the present King, endorsed the opinion that in London every working man and woman lost upon the lowest average about twenty days in a year from simple exhaustion due to the vitiated air of overcrowded dwellings. Mr. Charles Booth, Mr. George Haw, and other authorities tell us that the dens in which so many thousands of the London population have to make their homes degrade and demoralise the people, enfeeble them both in body and mind, and prepare them in their childhood for careers of pauperism, lunacy, and crime. As long as vast masses of the people of London live under the deplorable conditions which all of us acknowledge, there will always be a certain percentage of them who will develop into habitual criminals. You may exterminate the present generation as much as you please by the gallows or any other agency, but a fresh crop is always coming up, and it will be as great a danger to you as their predecessors. As long as the source of supply remains, the habitual criminal will be forthcoming, and to blink this fact is to ignore the fundamental problem of habitual crime.

The common method of punishing criminals in every country is to give a light sentence at first; if he comes up a second time before the courts, he receives a slightly longer sentence; and if he returns again and again, he gets three, five, or ten years' penal servitude. This principle of cumulative punishment, as it is called, is no doubt not a radical cure for the disposition to crime; but that only proves the truism that punishment of no kind can be an infallible remedy for crime.

Penal servitude for life, which Dr. Anderson proposes for a certain class of offenders, is by its very nature a total denial of liberty and therefore stands

self-condemned. It has no chance of obtaining the sanction of Parliament; but if it did become law, it would soon fall into deserved contempt, for judge or jury will ever convict knowing what conviction involves. The public are thoroughly penetrated with the ideas of the time, saturated with the spirit of mildness and humanity, and a cruel law must soon become a dead letter. Besides, only a few years ago the whole of the prison regulations were reformed by the Home Secretary in accordance with the humanitarian views of the age, so as to cut off the supply of habitual criminals at the very source by giving juveniles every chance of reform. Sufficient time has not been given to the reform to prove its value and no change can therefore be thought of so soon. It must also be remembered that the best prison regulations and the best punishment in the world cannot efface crime, just as the best sanitation and the best remedies in the world cannot abolish disease. One very difficult thing is to distinguish the habitual criminal. How can we know of an offender that he will not reform? There are hidden potentialities of moral and spiritual upheaval in every human being, and no one dare say in any case that the recuperative power is exhausted and the man is doomed.

If, however, the demand is not for life sentences, but for an indefinite and indeterminate sentence, which will terminate as soon as the criminal is cured of his criminal proclivities, the answer is still, "impossible." Who can say the criminal is cured and can be let loose on society? It is not a matter like lunacy the disappearance of which can be tested definitely by medical experts. Good conduct in prison is no guarantee of good conduct in society.

"The only practical method of dealing with the habitual criminal at present is a wider application of the principle of conditional liberation. Many habitual criminals are at the present moment undergoing long sentences of detention. These sentences were inflicted not because of the prisoner's last offence, but because of his previous convictions."

"It sometimes happens that it would be safe enough to liberate this man long before his sentence has expired. In many cases he has passed the criminal age, and is unable to resume his former life even if he had the will. In some cases he is to all human appearance a reformed and altered man."

"It would be a good thing if the authorities, or some specially appointed board, had wider powers of dealing with such prisoners. As soon as they cease to be dangerous to society it is useless keeping them any longer in prison. They might be let out before three-fourths of their sentence has expired. If such a system were in operation, a Judge would feel that his sentence has not the irrevocable character it has now, and the enlarged opportunity of being



conditionally liberated would add enormously to the prisoner's incentive to good behaviour while in prison and after liberation had taken place. It is in the direction of enlarging the sphere of conditional liberation, and not in the direction of the indeterminate sentence, that penal reform should move. The indeterminate sentence would entrust a power to officialdom which the public will never bestow. But the public would be perfectly prepared to allow a larger amount of discretion in the way of conditionally liberating prisoners under long sentences of penal servitude.

#### WAR AT THE CENTURY'S END BY J. M. ROBERTSON.

A somewhat pessimistically-written article on the above topic in the *Humane Review* for April is in the shape of a criticism of the late Mr. Bellamy's doctrine, never perhaps intended to be taken too seriously and literally, that, in comparison with the horrors of the industrial and commercial warfare of the 19th century, actual military warfare is humane and even ennobling as a purgation of the base and selfish passions of man. Bellamy had cited the immunity from military service of children, women, and old and infirm people whom the industrial competition does not spare, the care of the wounded and sick, the prevention of unnecessary slaughter of the enemy, the generous and even honourable treatment of prisoners, the choosing of battle-fields on frontiers out of sight and sound of the masses, and the infrequency of war, as evidences of the more humane and less sordid character of military warfare. Mr. Robertson, however, cites facts from the doings of the allied troops in China which belie this rosy picture. He quotes largely from Mr. Dillon's now-famous article in the *Contemporary*, and the extracts are so gruesome and heart-rending that perhaps our readers will be thankful to be spared them. He finds the Russian and German troops most guilty and attributes this to the system of conscription, which brutalizes the soldiery while perfecting them as instruments of slaughter—an awful warning to British statesmanship which is already contemplating the adoption of compulsory military service. The English and American troops seem to carry the palm for looting and plundering, though they are hardly equal to the atrocities of cold blooded-torture, massacre and rape, laid to the charge of their Continental brethren. From the South African campaign too Mr. Robertson draws the lesson that in point of mere vindictive cruelty, callousness to the sufferings of animals and wanton disregard of the rights of property, the British soldier cannot with justice boast of his superiority to the Boer. As regards Japan, says the writer:—

"It is note-worthy that in the Chinese campaign the Japanese generals, finding *their* troops guilty of savagery,

energetically put it down, thus setting to the bulk of the European troops an example which they did not follow: but this restraint on the Japanese side was presumably a result of the fact that the Japanese racial instinct was not specially provoked as against the Chinese, and that the Japanese officers, on the contrary, racially resented the European attitude towards Asiatics. It is hardly to be expected that a general purification of warfare will ensue on the entrance of Japan into the list of militarist powers. Much more likely is it that Japan will follow the law of development exhibited in the European armies."

Mr. Robertson is not inclined to accept without the proverbial grain of salt Lord Roberts' testimony to the good behaviour and self-restraint of his men, and quotes against his official reports the private letters and descriptions of the soldiers themselves. From the point of view of mere sociology, it would seem unlikely that even British Soldiers should wholly escape the hardening influences so memorably exemplified among the continental troops in China. Finally the writer thus sums up:—

"There is without doubt a vital truth in what Bellamy says, or implies, as to the impossibility that human peace can ever be attained in a society whose industrial law is one of perpetual struggle and overthrow, competition and ruin. While men are content to accept as inevitable an inter-social warfare, in which at all times millions suffer misery and ignominy, they cannot conceivably so disquiet themselves over the phenomena of international war as to determine that it shall cease; and that it will ever proceed unaccompanied by horror and demoralisation is, be it said, once more, a vain hope. But to say this is to put aside as simple folly such formulas as that to which Bellamy stooped, to the effect that bloodshed purifies and partly saves the society which tolerates the war of industry. Of all sentimentalisms that is the most hollow. If a society is going downhill it will go only the faster the more it is militarised. The Spain of the end of the sixteenth century, and the France of the end of the seventeenth, seen as we can now see them, in due perspective, tell the story as clearly as do any of the empires of antiquity. And the one path of recovery, it would finally seem, is by way of such a cultivation of humanism as shall better all life in virtue of rationalising it. The humanitarian bent primarily on stopping bloodshed and minimising animal suffering has an easily accessible ground in common with the reformer bent primarily on making a better society. That common ground is just common sense.

#### COUNT TOLSTOY AS PHILOSOPHER, PROPHET AND MAN.

Mr. Ernest H. Crosby contributes an eloquent tribute to the greatness of this Russian saint, and we quote a few extracts from it, a summary being impossible. In answering the charge of inconsistency, the writer draws a distinction between the Russian and the American:

"I think I have said enough to show that Tolstoy approaches so near to absolute consistency that no American would be likely to find fault with him on that score. But this is not true of the Russians. They

are, I think, the most logical people in the world. Persuade a Russian that autocracy is a bad thing, and the chances are that he will at once begin to manufacture bombs for the Czar. Convince him that private wealth is wrong, and in half an hour you may find him on the street-corner with his pockets turned inside out, distributing his money to the poor. We Americans are not built upon that plan. We sometimes get new ideas too, and more or less revolutionary ones at that, but in our prudence we usually think them over for thirty, forty, or fifty years as the case may be, and death at least relieves us from responsibility. You may remember the story of the Irishman and the parrot. He heard that parrots lived to be two hundred years old; so he bought a young one to see if it was true. Our ideas usually survive us, like the parrot, and we never put them to the test. There are advantages on both sides, in the Russian and in the American system. The American is less likely to go off at half-cock, and the Russian is more likely to make valuable contributions to practical ethics."

Here is a contrast between the Count and Victor Hugo:

"The question of consistency is in the last resort one of sincerity, and no one can see Count Tolstoy, as I have seen him, without being convinced of that. The whole man is in his frank, serious, kindly face. Although he is dressed like a peasant, there is not the least suggestion of pose or self-consciousness in his appearance. He never thinks of the gallery. Victor Hugo had many of the ideas of Tolstoy. He rebelled against the distinction of rich and poor, of governed and governing. He showed his deep sympathy for the poor by directing that he should be buried in a pauper's coffin, and as a matter of fact his body was placed in one while it lay in state in the midst of mourning thousands. But Hugo knew that he could not have dressed as a peasant during his life without becoming hopelessly theatrical. He lacked the simplicity, the single-mindedness, which, in Tolstoy's case, convinces all who see him that he dresses and lives as he does because he cannot do otherwise. His inmost being has revolted against the injustice of the whole gentility business, and he must show it in his life or die of repression."

With respect to the criticism that Tolstoy is defective on the aesthetic side, and fails to appreciate the value of Beauty and Art, the writer admits in effect the justness of the criticism and proceeds:—

"In considering this matter of art we must remember that Tolstoy is not an "all-round man" by any means, but a prophet; and a prophet must in the nature of things be one-sided—he must lay the emphasis in one direction. It is notable that Jesus showed little interest in external art. He was an artist in literature (Was there ever anything written more artistic than the first part of the parable of the Prodigal Son?) But when his disciples called his attention to the wonders of the temple architecture, he had no eye for them. Although his father was a carpenter, and he may have worked at the trade himself, yet he never dwells on form. His life work lay in another direction. Tolstoy has not been able to divest himself of his literary art; it was too deeply bound up with his nature. His "Resurrection" shows it in all its original splendour, and Sir Henry Irving recently said that one of his two dramas was the strongest play of recent times. But he has turned his

back on the plastic arts, feeling that a divided world cannot do justice to them. If Tolstoy and William Morris could have been united in one man, we should have had an all-round man indeed. While Tolstoy has shortcomings on the external side, Morris has them on the spiritual. But would a man so balanced have been such a force in the world as either of these incomparable men? I doubt it."

"Tolstoy's great discovery and central theory is the old, old truth that *love* is the natural spiritual energy of man, and that all circumstances, laws, and institutions must bend before this prime function of his soul. In short, he takes Christianity at its word, not because "it is written" but because he has found its truth attested in his deepest experience. All of his apparent eccentricities become intelligible, or even necessary, when we trace them back to this paramount obligation of loving. While he is not a constructive philosopher, his spirit must underlie any sound piece of construction. "Except the Lord build the house, they labor in vain that build it" Tolstoy's great importance in the bringing in of a new day is his dramatic value. Himself a great dramatist, he has always seen things dramatically, and he has at last become a dramatic representation of the need of the age. Scenes, pictures, and events have always impressed him more than arguments and books. The freezing of his coachman at Kazan, while he was dancing at a ball first called his attention to the grievances of the working classes. An execution by guillotine which he attended at Paris, first shook his faith in government. It was his own experience in the Crimean war that revealed the horror of wholesale murder to him. The contrast between himself and a peasant, as they both dropped a coin in a beggar's hat, opened his eyes to the defects of a richman's charity. His dramatic instinct made him a great novelist and dramatist, and made him understand the Gospels as few men have understood them. As he explains them you see the events as if they occurred in the streets to-day, and you comprehend why the Pharisees speak thus and the disciples answer so. And now unwittingly, but by an unerring instinct, he has become himself the protagonist in a great drama. Like the Roman knight he has plunged into the abyss yawning between class and class, and in his own person is endeavoring to realize the reconciliation of a world divided against itself. Tolstoy has written many great works, but the greatest is his simple pathetic, inevitable life. If he could have helped it, we might criticize his role; but it has been as much the work of destiny as Mont Blanc or the Atlantic."

"*The Art Journal*" an excellent monthly published by Messrs. H. Virtue & Co., London, deserves to be in the household of every educated Indian. The illustrations are excellent and the letter press is carefully done. It combines artistic taste with literary excellence. The annual subscription of ten shillings is very cheap.

The twelfth and the last part of the series of illustrated sketches of the Paris Exhibition issued by the same firm is to hand. We have already noticed some of these and we have no doubt that those who have not been fortunate enough to witness the Paris Exhibition will get an excellent idea of the same from these.

## THE WORSHIP OF THE GODS.

The *Central Hindu College Magazine* for April contains the second of Mrs. Annie Besant's articles on "In Defence of Hinduism." It is entitled "The Worship of the Gods" and deserves to be studied.

"Hinduism is polytheistic, and polytheism is a low form of religion." Such is an attack often made by thoughtless people, who fail to see that all religions, except when much materialised, are polytheistic in exactly the same sense as is Hinduism. Truly there is but one Existence, one Life, whence come, and in which exist, all existences, all lives. All, save the One, are derived, dependent. The ONE alone is Self-Existent, the Eternal Changeless BRAHMAN. Therefore in the Scriptures we read of "The Creation of the Gods," just as we read of "The Creation of Men." The Gods come forth from Brahma, Himself but a partial manifestation of the ONE, but Their existence is as much a fact in nature as is the existence of men, and no more negates the Divine Unity than does our own.

In a universe the highest manifestation of the Divine Life is the Saguna Brahman, or Ishvara, the supreme Lord of the universe. For that universe He has three necessary aspects, the constructive (or creative), the preservative, and the destructive. He thus manifests Himself in Three Forms, the Trimurti. From Him, in His constructive aspect, the Gods are emanated, and thereafter act as His Agents His Ministers, carrying on the work of the universe, building, preserving and destroying. They exist in innumerable grades. Concerned with the cosmic order are seven chief classes, each under its own Ruler, of whom five are at present revealed, generally named Indra, Vayu, Agni, Varuna and Kshiti. These names represent offices, rather than individuals; the individual who takes up the office of Indra Deva takes that name, so that while there is a succession of individuals who are Lords of the Akasha, each is spoken of simply as Indra. Readers of the *Mahabharata* will remember that five Indras once appeared together in the presence of Mahadeva, one regnant, and five whose reigns were over.) Under these chief Rulers are hosts of Devas, who carry on the detail activities of the universe, vast hierarchies of brilliant splendid Intelligences, flashing through the realms of space, administering the laws which are the expression of the will of Ishvara; and below Them again the minor Devas, who are concerned with single worlds, and yet lesser ones who superintend single countries and even districts. The universe is not an illogical absurdity in which exist minerals, plants, animals and men, in regular gradation, and then a vast gulf of nothingness with one supreme God on the other side; it is an ordered whole, a perfect unbroken chain of living beings. All religions have recognised this, and have given different names, but similar functions, to these vast hierarchies that stretch between man and Ishvara. The Buddhist, like the Hindu, calls them Devas. The Zoroastrian speaks of them as Ferishtas. The Christian and Mussulman call them Archangels and Angels. Names matter little. It is rather interesting that a famous Protestant writer, John Bunyan, speaks of the Angels by the Hindu name, and calls them "Shining Ones," Devas. Probably he saw Them, and uses the name which best describes Their appearance.

The question then arises : Should men worship the Gods? Why not? We will not just now consider the worship of the Trimurti, but apply the question to the cosmic Deities and Those especially concerned with human evolution. The peasant, toiling at his crops, may surely well pray for the help and blessing of the Devas who apply and adjust the laws which regulate rain and sunshine. If he is not committing a sin in asking advice or help from a man wiser than himself, why is he wrong in asking help from living beings, stretching from a speck of dust right up to Ishvara, in every grade of developing life and intelligence, more numerous above us than below?

Then there are many Devas who are concerned especially with the evolution of man in this world and in the worlds immediately connected with it. Such are Ganeshti, Sarasvati and many others, who are ever ready to help and illuminate those who turn to Them for aid. Other types and kinds also there are, but this brief enumeration will sufficiently serve.

Is there any reason why men should not appeal to and respect a non-human superior, as they do a human, but in a higher degree? A man with a petition does not need to present it directly to the Emperor: he places it in the hands of an officer, present in his district, who wields the delegated imperial power. There is no disloyalty in recognising the Emperor's local representative, and there is no blasphemy in praying or showing reverence to the Deva representative of Ishvara. Moreover an uneducated man can very dimly figure to himself the invisible Ruler, human or Divine, and his love and loyalty are more readily excited by a more concrete, benevolent and protective power, felt as immediately present. The invisible Ruler remains as a brooding splendid Presence, overarching all—a dimly seen Glory giving dignity and breadth to life.

As a man evolves, he will cease to pray to the cosmic Deities, recognising that they need no askings and pleadings of his to guide Their work, accepting all They bring, as the elder child ceases to importune his father and trusts his love and wisdom to do the best. But he will none the less treat them with the reverence due to Their high office, and with the gratitude due to Their ceaseless work for the world.

To the Devas concerned with human evolution, worship may also most fitly be addressed, for the strong aid They willingly render, for the illumination They can shed on the mind, for the teaching They are ready to impart. The student may pray to Ganeshti, to Sarasvati, and find his studies made easier and simpler by Their help; and all may walk through life with their path brightened by this gracious companionship of our Elders, this kindly aid of the strong to the weak. Man need not be lonely, unless he so chooses, in a world so full of helpful Beings, and many a one left desolate by man has found consoling friendship in the Gods.

So let not the Hindu be overawed by five-syllabled epithets hurled at his most rational religion, but rather rejoice in the Polytheism which fills all the worlds with shining Forms, and loving Faces, and Hands outstretched to help and bless.

### Shakespeare's King Lear and Indian Politics.

BY  
WILLIAM MILLER, C. I. E., D. D., L. L. D.,  
RUPEE ONE—TWO SHILLINGS.

APPLY TO—G. A. NATESAN & CO., ESPLANADE, MADRAS.

## DEPARTMENTAL NOTES.

## Educational.

(By a Headmaster.)

## MADRAS MATRICULATION.

The University of Madras has, after several sittings, revised the Matriculation Examination. The sanction of the Governor may be expected soon to convert the Senate's resolutions into by-laws, and the examination of December 1902 may be the first under the revised scheme. Headmasters therefore will do well to adapt the course of studies of their fifth forms to the new requirements; and in view of the paper on *Pronunciation*, an immediate general flip extending downwards to the lowest classes is by no means too early. And in this matter reform has to begin in the teacher himself before it can be looked for in the taught.

## THEN AND NOW.

It is instructive to contrast the general interest and excitement of the controversy regarding the recent changes with the comparative tranquillity and even indifference with which changes of curriculum were adopted in the past decade. The debates in the Senate itself indicate a spirit of earnestness and a knowledge of educational matters more widely spread among the members than before, while teachers as such in various places, and the general public through the newspapers and educational journals have contributed a great deal to the thorough discussion of the questions involved. The interesting correspondence in the *Madras Mail* between two educationists, which ended a few days ago, is but a minor episode in a somewhat protracted and well-conducted campaign of reform, in which numbers of combatants, great and small, engaged each other in various parts of the field, fully aware of the interests involved and anxious that these should not suffer in the conflict.

## ONLY A HARKING BACK.

A curious feature of the reforms is that some of the important ones consist in a reversion to former conditions. It is not meant that this reversion is of the nature of a retrograde movement; the true lesson to be learned is the unwisdom of a few individuals hastily deciding upon and introducing changes which a few years' experience may condemn emphatically. In the general interest and agitation evoked by the recent action of the University, we may discern a guarantee of steady and safe movement, if not of far-sighted and heroic reform.

## THE ENGLISH TEXT BOOKS.

The restoration of the English text books must have brought joy to the hearts of publishers and annotators. One can even conceive them straining their ears to catch the earliest whispers from the Senate House that may convey news of the selections for the next year. To judge of the feeling with which notes and note-makers are generally denounced, one would infer that in the higher ranks of the profession of teaching there was a healthy revolt from that kind of authorship and scorn for the sordid lucre that it might bring. A rupee, however, is sixteen annas, and the making of cribs for examination purposes is a sure means of adding to the emoluments of a teacher which are not excessive. There are notes and notes, says every one that deals in them; but the plea avails only in a few cases. But the annotators are not without other pleas, e.g. the poor private candidate. On the whole, there is need for the *ethics* of the business no less than for its *utility* to be well threshed out. If public opinion could be educated to any definite purpose, it might be trusted to supply the needed corrective.

## SCIENCE DETHRONED!

The scientific fellows of the Senate and the more enthusiastic science masters of high schools are bewailing the relegation of science to a subordinate place in the Matriculation curriculum. A separate minimum will be no longer required in that subject, and this is represented as amounting to a denial of the value of science as a subject of study. Attempts have even been made to show that the change has been mainly brought about by the efforts of those who really believe that scientific knowledge is not worth having to the same extent as humanistic knowledge. This is going too far. It is scarcely fair even in the heat of argument to assume that a certain undesirable effect will follow a certain course of action, and then to charge those that advocate that course of action with a deliberate intention to produce that undesirable effect. There are a great many persons who cannot see why the grouping of history and science together should involve as of necessity the neglect of science-teaching or the cessation of science-learning. Neither teacher nor taught can afford to neglect science totally. The more ambitious pupils as well as the more earnest and docile ones will pay equal attention to both members of the group. As for the others, there is nothing so very alarming or foolish in allowing a slight deficiency in science to be made up for by extra merit in another subject. In fact the principle of compensation may be much more largely recog-

nised in the Matriculation than it is at present. Few will have the hardihood to deny that scientific knowledge is of equal worth with any other knowledge or that it is of vital importance to this country; but not everybody that grants these facts will be prepared to argue that no pupil ought to be allowed to enter the University who has not satisfied a particularly uncertain and varying test in that knowledge. And this too when we remember that scientific training and scientific method, rather than scientific knowledge, are to be aimed at in the teaching of science, and that in our colleges not less than in our schools what is acquired is the knowledge alone, ill-understood and seldom used, never the method or spirit of science. There are moments of disgust when one feels disposed to have no science at all rather than the pseudo-science which alone even its loudest champions (no blame to them) find it possible under existing conditions to impart.

#### GERMAN TECHNICAL HIGH SCHOOLS.

At this moment when there is a great deal of discussion in regard to the necessity for Technical Education in India, it may serve some useful purpose to have an idea of what is being done abroad in regard to it. The German system of education has come in for a good deal of praise, and her progress in trade is ascribed to her unique organisations for imparting Technical Education to the people. The following account taken from *Engineering* will give an idea of the work of German Technical Schools.

During the last winter semester the nine technical high schools of the German Empire were attended by 14,734 students. The corresponding figures for the winter 1890-91, ten years ago, are 5,432. This means an increase of 9,302 students, or 171 per cent. Since the population of the empire has grown by about 10 per cent. in this decade, the increase in the number of students is a very characteristic sign of the interest which is attached to securing the best technical training that the country can impart. The nine schools are at Aachen, Berlin, Brunswick, Darmstadt, Dresden, Hanover, Karlsruhe, Munich, Stuttgart: and the figures quoted above comprise real students and so-called hospitants, who join for an entire particular course without being full students. Included are, further, the comparatively few pupils, who attend only certain lectures. The largest high school is at Berlin. The term "best attended" might be misunderstood, for in most cases the schools have as many pupils as they can accommodate. Berlin had 4,343 during the winter which is just passed; it is well known that the crush on the college is such that, in some branches,

preference has to be given to German subjects whilst, on the whole, the foreigner is as welcome as the native. The percentage increase since 1891 is 165. This figure is surpassed by Aachen, with a growth of 186 per cent; Munich, 194 per cent.; Dresden, 212 per cent.; and by Darmstadt, with an increase of 426 per cent. Ten years ago Darmstadt had only 318 technical students; now there are 1674 in the new enlarged buildings. The average increase is 171 per cent., as we have stated already. The most popular branches are engineering and electro-technics; half of the total number of students fall under this head. Architecture and building have also made rapid strides. Chemistry, metallurgy, and mining do not attract many more students than formerly; the increase is only 6.6 per cent. Shipbuilding now claims 2 per cent. more students than ten years ago. As to chemistry and metallurgy, it must not be forgotten that universities and special institutes continue to be favoured by those who wish to become chemists and miners. But the small rise in shipbuilding is rather surprising when we think of the remarkable development of German shipping and shipbuilding. The official recognition of this industry has, however, been somewhat neglected; the German equivalent of our Institution of Naval Architects was not founded till two years ago. The popularity of mathematics, natural science, and forest culture, seems actually to have declined. But we should not like to draw any conclusions from the decrease in the attendance at these lectures. For most of the nine towns are also universities, and the two classes of educational institutions enter, to a certain degree into competition—a matter of difficulty for the authorities.

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**Legal.***By A High Court Vakil.***THE POLICE IN INDIA.**

Mr. Pennell has shown that the police in Noakhali hamper rather than assist the administration of justice. His successor has left it on record that there is something rotten in the Police department in Noakhali. Two results have followed from these strictures. The Police Superintendent of Noakhali is still in service and is transferred to a healthier place. Those in the lower rung of the ladder are suspended. This is not the first time that such things have happened in India. In Madras, the Chief Justice, who carefully measures his words and who is not given to using strong language, said in the Mahant murder case that the Police working of the case was extraordinary and mysterious. It is not unlikely that some Inspector or Assistant Inspector will lose his appointment for this. And again, in the Ranga Reddy murder case, it is clear that the Police have been on the wrong track. The question is whether there is no means of remedying this unwholesome state of affairs. It was pointed out in these columns last month that nowhere in the world is the Police force so satisfactory as in England. Why is it so different in this country? One reason is this. In England the Police is well paid. In India, it is the most ill paid. You cannot get better men for the pay that you offer them in India. In India everything is anomalous. You have Viceroy and Governors who are paid more handsomely than Secretaries of State and the Lord Chancellor and the Prime-Minister. You have clerks in the Taluks and peons in the Police department who are paid less than the man who sweeps the public thoroughfares in England. This must affect the morale of the abnormally high-paid and the wretchedly low-paid.

**DIFFERENCE BETWEEN A JURY TRIAL AND TRIAL WITH ASSESSORS.**

The elaborate judgment which Sir. Justice Bhashyam Aiyengar delivered in what is known as the Ranga Reddy murder case deals exhaustively with the history of trial with assessors in this country. When Criminal Courts were established on a permanent basis, it was felt that the presiding European Judge should be assisted by competent natives in the disposal of cases. The European nunciated the law; the natives judged upon the demeanour of the witnesses and upon their reliability. It was not in criminal trials alone that this system was adopted. In the Civil Courts, the pandit or moulvi assisted the European Judge. It is curious to note that the assessors,

in Civil Cases (the pandits and moulvis), supplied the law to the judge. Even in the Judicial Committee of the Privy Council assessors were called in to assist the judges. To this day, in important cases, the House of Lords indents upon the assistance of the judges of the High Court. The assessors undoubtedly are required to give their opinions as experts. It is difficult to understand why the professional men employed in the Ranga Reddy murder case objected to assessors being regarded as experts. No doubt the positions do not exactly correspond. And as Sir V. Bhashyam put it, *technically* the status is not the same. But it is beyond question that there cannot be closer analogy than between experts and assessors. It is very different with the jury. The origin of the jury trial is well-known. It was to enable the accused to be tried by his peers. The accused is given the opportunity of being judged by men of his own class, who know the ways of the world and who are not hampered by technicalities of law in arriving at their conclusions. The jury men try the accused, whereas the assessors assist the judge in coming to a proper conclusion upon the materials placed before him. The jury is a part of the court and a most important part of it. The assessor is only an appendage, he does not enter into the *personnel* of the tribunal.

**THE NOAKHALI MURDER CASE.**

The judgment of their Lordships Justices Amir Ali and Pratt in the appeal preferred by the accused in this case has been the subject of much adverse comment in the native press. We make no apology for extracting in full, the following criticism of our legal contemporary, *The Calcutta Weekly Notes*;—

Very unusual procedure seems to have been adopted by the High Court in the case of *Empress v. Sadak Ali and others*, popularly known as the Noakhali murder case. We have not been able to find any precedent for remanding a capital sentence case for retrial by the Court below when the High Court had a complete record and considered the whole of the evidence before it. The order of remand is all the more remarkable as it has reference to only one of several co-accused whose offence arises out of one and the same transaction, and the evidence on record has bearing on the whole case. We could have understood the order if the remand had been under Section 375 of the Code of Criminal Procedure for the purpose of further enquiry or for taking additional evidence. No doubt, Section 879 gives the High Court the power to order a new trial on the same charge. But if a retrial was ordered under that Section, it is a matter of ordinary judicial fairness that the remanding Court should not comment on the evidence or express any

opinion as to the credibility of any articular witness or witnesses. If it is not tolerated by the law that publicists should make any comments on a pending case lest there should be prejudice in the trial, on what principle is it to be justified that an Appellate Court should remand a case for retrial with findings as to who is to be relied on, and who not, and what inferences arise from the evidence recorded in the previous trial? It is manifestly placing a subordinate Court and the assessors in an almost impossible position, namely, to arrive at any independent finding.

The order and directions of the remanding Court transgress the fundamental principles of judicial trial in another respect. A very material issue in the case is whether the Police had placed obstacles in the way of a proper judicial enquiry into it and whether a certain police-officer had perjured himself during the trial and attempted to pass off a certain forged document as genuine. We cannot comprehend how a Court not finally disposing of the case but remanding it, as against the principal accused, for a new trial, can record any finding with regard to such issues. Still this is what the learned judges have done. This seems all the more unfortunate as certain Rules in connection with those issues are still pending before the same Court.

The Court has thus, in sending the case for retrial, not only anticipated the functions of the lower Court, but has also rendered itself incompetent to sit as an Appellate Court in any proceedings connected with this case. We have every confidence that the learned Chief Justice will take steps to ensure a proper judicial enquiry into the whole case rather than allow this remand judgment to throttle it, so far at least as the conduct of the Police is concerned. The proper course for the High Court in this case, in our humble opinion, would have been to maintain a judicial unconcern with regard to the irrelevant matters in the Sessions Judge's judgment until the hearing, and then, after censuring Mr Pennell for the impropriety of his language and for the introduction of irrelevant matters in his judgment, to proceed to dispose of the whole case on the record before it or to remand the same for retrial on the ground of bias of the judge or prejudice to the accused, if their Lordships were of that opinion.

The following extract from remand judgment shows clearly that their Lordships were not altogether unconscious of the possibility of influencing the lower Court upon the retrial:—

"In view of the course which we propose to take, so far as Sadak is concerned, we do not wish to express, nor

would it be expedient or right that we should express any opinion on the facts to which we have referred. But we think we are entitled to explain the conclusion to which the general evidence has led us as to the time when and the circumstances under which this crime appears to have been committed, etc, etc,"

We see no justification for what follows and hardly any for what precedes the above. The truth or otherwise of the whole case will have to be decided by the Court below, on what their Lordships call "the general evidence," and it does not seem right for their Lordships not only to pass on their own conjectures on a subordinate Court, but also detach portions of this "general evidence" and mark out particular exhibits and stamp them as true or untrue. It is indeed very hard on the accused to be sent for retrial before a subordinate Court with the suggestions of a superior Court as to how and what he may be found guilty of. Had anything similar been done, at any other time, by any lower Court, their Lordships would surely have quashed the judgment.

#### MANAGING DIRECTOR NOT A SALARIED SERVANT.

MR. JUSTICE COZENS-HARDY has decided, in the case of the Newspaper Proprietary Syndicate, Limited, that a managing-director was not a salaried servant and could not claim his remuneration in priority to the debenture-holders.

#### A CURIOUS CASE.

A somewhat novel case recently came before the Appellate Division of the New York Supreme Court. The right of the fair sex to wear long skirts, and thereby become most useful scavengers, has never been denied, however much such an occupation may horrify onlookers. The right, however, to use them in travelling and thereby contributing to an accident, was denied in the case of *Smith v. Kingston City R. W. Co.*, when a lady thus attired came to grief on descending from the platform of a street car. The conductor gave the lady plenty of time to alight, but not sufficient time to disentangle her train, which caught on the platform and resulted in her being dragged some distance thereby. The Appellate Division, with due gallantry, (whether they were married men or not does not appear), held that a woman was entitled not only to wear long skirts, but to a sufficient allowance of time to enable her to step off the car herself as well as to clear her skirts, laying down the rule that it was the duty of a conductor to see that a woman descending from a car was free from any attachment connecting her with the vehicle before starting again.

**Trade & Industry.***By Mercantilist.***STATE AID TO SERICULTURE IN SERBIA.**

At one time sericulture was largely carried on in Serbia, the greater part of its territory enjoying a climate extremely favourable to this industry. Following on an attack of *pèbrine* (an epidemic among silkworms) the industry began to decline, and the majority of the cultivators abandoned it in order to direct their efforts towards more remunerative products. The Government realising the situation bought eggs in France and Italy to be distributed gratuitously, and established nurseries for mulberry trees in order to distribute the young plants. As the result of these measures, the industry of silkworm raising developed so rapidly that the country is now able to furnish not only the silk required for the materials of the national dress, but even to export cocoons to other countries. It may be added that every year, in the State agricultural stations, practical classes and model methods of silkworm rearing are open to sericulturists in the neighbourhood. Finally, the State, with a view to assuring the sale of the product, accords certain privileges to buyers of cocoons.

**BOUNTY ON FLAX AND HEMP GROWING IN FRANCE.**

A decree issued by the French Minister of agriculture fixes the amount of bounty payable to hemp and flax growers at 77 fr. 50 c. per hectare (about 25s. per acre) for 1900. A law, dated April 9th, 1898, accords for a period of six years bounties to growers of hemp and flax, cultivating an area of not less than eight acres of these crops, to a total annual amount of not more than 2,500,000 francs, to be distributed in proportion to the area cultivated.

**AGRICULTURAL EXHIBITION AT MILAN.**

An exhibition announced to be opened in Milan in Italy in the current month is likely to be of a very comprehensive character. The exhibits will include not only dogs, farm yard animals, especially fat poultry, bees, rabbits, &c., but articles connected with hunting, fishing, automobiles, and sport in general.

The exhibition was originated by the Lombard Association of Journalists, but has been supported by the Italian Government and the Municipality of Milan.

**A JAPANESE COMMERCIAL MUSEUM IN BANGKOK.**

A short time ago a Japanese sample depot and commercial museum was opened in the principal town of Siam. It has extensive and suitable premises in the centre of the business quarter of Bangkok. It is a Japanese Government Institution, and [the expenses, with few

exceptions, are borne by the State. There are samples of nearly all Japanese articles of trade, which show the producing powers of Japanese traders in a very favourable light. The officials of the museum place themselves at the disposal of every one who wishes to make a thorough inspection of the various products. Orders can be given on the various samples, at a commission of a certain percentage on the marked prices. This percentage was fixed definitely by the Japanese Government.

The utility of the Commercial Museum has been very successfully shown, in spite of the small quantity of printed matter, as the catalogues, price-lists and placards are not sufficient to satisfy the traders.

The Commercial Museum undertakes to order goods in large, as well as in small, quantities, and those ordering small quantities have the advantage of not having to pay a higher rate of freight than if they ordered large parcels. The clientele of the institution not only consists of Siamese merchants in the capital, but also Europeans settled there, as these make their purchases preferentially from the splendid collections of Japanese samples.

**A CUSTOMS MUSEUM IN BELGRADE.**

According to information received from the Austro-Hungarian Consul in Belgrade, a so-called Customs Museum is in existence there. Its principal object is to make the Custom House officials acquainted with the nature and different descriptions of the various descriptions of goods, and to enable importers to learn the various rates of duty by practical knowledge of samples. As, however, numerous German, Russian, English and French firms have sent price-lists and samples of their manufactures, the Belgrade Customs Museum forms a regular dépôt for samples of the industrial products of these countries. Belgrade merchants and other interested parties make a good use of this Customs Museum for business purposes.

**BLOTTING PAPER.**

A new era for blotting paper is shortly to begin, says the *Invention*. From all accounts, it would seem that more progress in being made in blotting just at present than in any one of the other kinds of paper. If this should savour of an overstatement of the facts, it can at least be said with truth that a great many experiments are now being made by the manufacturers of blotting, all looking to the greater utilisation of the kind of paper in the mechanical and kindred arts.

Many of these experiments have been eminently successful. As a result of them, blotting paper is rapidly taking the place of glass, cork, and tin for caps on bottles. It is also used by piano manufacturers instead of



deadening felts. Tailors now use thick blotting papers for pressing cloths. Jewellers also use them for chucks on polishing machines as they do not let the stones slip so easily as other materials. Electricians have found that blotting paper, when treated to chemical baths, is just what they need for insulating purposes. They use large quantities of it.

These are but a few of the many new uses to which blotting papers are put. The list could be extended almost indefinitely. It even includes bath robes, which are now being made of such papers by the Germans. But perhaps the most interesting experiments that are now going on with these papers relate to the efforts being made to substitute blotting papers for linen bandages in the hospitals. Already a pliable sheet of paper made up of many very thin sheets is being used by surgeons for dressing wounds. The advantage of the blotting paper lies in its absorbent qualities and its cheapness. After each dressing the solid bandages are burned up.

#### HOW SHELLAC IS MADE.

Lac is produced chiefly in Bengal and Assam. It is obtained from incrustations on the branches of various trees, produced by the insect *Coccus lacca* which punctures the bark. The incrustation called lac is formed by the female insect, and the bits of branches covered with it are termed stick lac. These bits are gathered and treated with water, which process separates the lac from the twigs and reduces it to the form of small grains. It is now called seed lac. Shellac is prepared by putting the seed lac into a cloth bag, which is placed over a slow fire. When the lac inside it melts, the cloth is twisted hard, so that the liquid comes out of the pores of the cloth and is allowed to drop on a plantain leaf put underneath or a glazed porcelain trough. The glossy nature of the leaf causes the liquid lac to spread into thin layers, which, when cool, becomes the shellac of commerce. The lower qualities of seed lac are treated in the same way, but are allowed to form thick buttons and constitute "button lac."

#### WOVEN FABRICS.

No. 30 of Messrs. Dawbarn and Ward's "Useful Arts and Handicrafts" series is a book that ought to be in every household. In these days in which fashion plays a prominent part and in which the tailor's bill is not an inconsiderable item of expense, it is necessary that one should know how to clean or repair the good things that may be accidentally spoiled. The book under review gives simple instructions as to how to decorate woven fabrics, repair them without much sewing and cleanse them from dust, grease and stains. For the several useful recipes alone that it contains for cleaning the several kinds of woven fabrics, it is more than worth the six pence that is charged for it.

#### Medical.

*By a Doctor.*

#### MOTHER BABY AND NURSERY.

This is an interesting and useful book in which are given elaborate instructions to help a mother to understand her babe, to feed it properly, to place it in healthful surroundings and to watch its growth and development intelligently and with profit. Evidently, the author has drawn very much from her personal experience of children's diseases for the contents of the book. The one noteworthy feature is that the illustrations given are all from living pictures. The author's name is Genevieve Tucker, M. D., and the book is published by Mr. T. Fisher Unwin in London.

#### A BAD HABIT.

Reading at meals says "*Health*" is a thing that we are all, more or less, prone to indulge in when we happen to find ourselves restricted to our own society at breakfast, luncheon, or dinner, but it is none the less an exceedingly bad habit, and deleterious in the extreme. The habit of reading at meals is to be condemned, and more particularly when it has grown to one of actual study, and when the reader endeavours to gain knowledge and to save time at his meals. The solitary reader, if he reads, should read only what is light and amusing. The common practice of having the morning paper at our breakfast table is not especially injurious, as it furnishes items for conversation and does not particularly exercise the brain, but if it should do so, our advice is to at once discontinue it. Digestion is always best served when the mind is free from care and when the physical processes of our frames are left to discharge their work free from nervous trammels. It is on the ground of the elevation of spirits produced by cheerful association with others, that pleasant company at meals has always formed a condition of social employment. The stimulus to nervous activity which is thus given acts beneficially on the digestive powers, just as the man who is harassed, worried, and excited will not be likely to digest or eat a satisfactory meal.

#### THE NEW TREATMENT OF PLAGUE.

Dr. Tukina has addressed the following letter to Professor Gajjar on the method of plague treatment introduced by the latter:—

I beg to inform you that I tried your Liq. Iodine Terchloride in a good number of cases of plague and some few cases of remittent fever during the recent epidemic in Bombay. I herewith send you the form filled up with the

results obtained by its use in cases of bubonic and other fevers. From this I come to the following conclusions:—

(a) That Iodine Terchloride acts as a sure and effective antipyretic and germicide remedy. (b) That it has undoubted curative powers in cases of plague if such cases be treated with the solution at the very outset of the symptoms. This you will find from the form I have filled up. Even in moderately severe cases if the cases be put under its influence as soon as the symptoms have developed, it has proved successful in my hands. (c) In advanced cases, although it acts as an antipyretic, still the results are unfavourable. (d) As compared with the results obtained by me from the use of other modes or remedial means for the treatment of plague, your Iodine Terchloride has given far better results in my hands. (e) That in mild cases of plague no other stimulants are necessary, except the regular doses of the solution two hours with rum and milk as a diet at short intervals. (f) That in serious cases where there is fear of the failure of the heart, I had recourse to the stimulant mixture of Caffeine Citrate, spirit ammonia aromatic strychnine, and brandy, and the stimulant mixture given alternately with your solution has produced beneficial results in such cases. (g) That in cases of remittent fevers of a mild type and in cases of influenza, it has acted as an antipyretic from the very first dose. The fever did not return; and so there was no need for giving any anti-periodic as quinine. (h) As adjuncts I had recourse to saline draught for constipation; to rum or brandy with milk, or stimulant mixture in cases in which these were indicated; to ice on the head constantly. (i) Lastly, I would urge the necessity of mentioning to you that I had used your solution every two or three hours day and night in plague cases till recovery took place.

## THE HOUSE-HOLD PHYSICIAN.

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## Science.

(By a Master of Arts.)

### ORIGINAL RESEARCH IN INDIA

RAI BAHADUR CHUNILAL BOSE M. B., F. C. S.

It has often been remarked that the natives of India, as a nation, are devoid of originality and taste for research. The charge, of course, is grave and is partly justifiable. Some of us are by nature wanting in zeal for scientific pursuits, some are, by circumstances, forced to seek occupations which prevent us from pursuing such wholly scientific avocations. The few that have wealth and leisure at their disposal are not fired with the zeal and enthusiasm of the earnest student of science. For the poor student that has time and taste for the research work there is not enough encouragement either from the state or from the University.

Nevertheless, Calcutta has been able to tide over the difficulties somehow and is progressing rapidly in the field of science. There are already the Professors Bose and Roy of the Presidency College, whose researches are largely appreciated by the scientists in England. There are two more graduates receiving Research scholarship from the Government and are engaged in original research. It is only a few weeks ago that Rai Bahadur Chuni Lal Bose, M. B., F. C. S. of the Medical College, extracted poison from a bell-like flower named *Kabri* and in appreciation of his merits as a student of research, he has been awarded the *Coats Memorial Medal*. This is but the first of his researches and many more, we hope, would follow this in rapid succession. Bombay too is not far behind Calcutta. She has found in Prof. T. K. Gajjar, a man endowed with the power of observation and a taste for research, an earnest worker in the field of Techno-Chemistry; and it may perhaps, interest our readers to be here reminded that he was able to remove the scar from the Queen's statue in Bombay while so many men of science both local and foreign, had given up the task as hopeless. Now that he has himself opened a Techno-Chemical Laboratory much might be expected of him which would rank him with Profs. Bose and Roy. This is an institution which prepares the minds of young men with scientific taste, towards original research, and Prof. Ramsay has also borne ample testimony to the usefulness of the work done by the students there. Now is the time for the scientifically-inclined young men to join this Laboratory and prepare their minds for research before the opening of the Research Univer-

sity of Tata. Professor Ramsay has said in his report to the Research Institute Committee that the University degrees of B. A. and B. Sc. of Madras, Bombay and Calcutta do not befit the Indian Graduate for original research all at once. It becomes us therefore to prepare ourselves to the work on hand. So far so good. It is a matter for regret that no student of Science of the Madras University has been able to show original work. The writer ventures to suggest to the public and to the University that a few scholarships should be instituted to enable students to pursue research under the guidance of able scientists. We have also referred to the Research Scholarship instituted by the Bengal Government in May of last year. And the Government, in so doing, has placed before the other Governments a laudable example to be similarly followed. It has also been suggested by Prof. Ramsay that the various Colleges of India maintained by Public funds or by Native States might grant scholarships to deserving students to enable them to pursue research under the auspices of the Research University. It is, indeed, sad to think that while Calcutta and Bombay are on the path of progress in Science, Madras cannot boast of a single man fit to compare with Prof. Bose or Prof. Roy.

#### AN INCENTIVE TO INVENTIONS.

The *Scientific American* mentions many instances of large prizes offered by associations and others interested in improving the economic condition of the country. The Pollak prize for life saving devices was no less than 20,000 dollars in the past year, the prize offered for labour saving machinery for the sugar business was \$ 6500, besides a number of smaller prizes. In the present year, there is to be a prize for inventions or discovery in the domain of physical science. another in Chemistry and a third in medicine and physiology. The value of each of these prizes is \$ 80,400! The inventors are, besides the prizes they win, allowed to have all the material advantages of their inventions. Professor Pupirs recently sold an invention for nearly \$ 500,000. Such is the encouragement given in America for fresh discoveries in the domain of arts and sciences.

#### TESLA'S WIRELESS TELEGRAPHY.

Long distance wireless telegraphy is about to take an enormous stride on account of Tesla's latest development. In Marconi's system, Hertzian waves are generated which are transmitted aerially or rather etherially. Tesla on the other hand produces "stationary electrical waves in the earth" which can be transmitted through the terrestrial globe just as through a wire to the greatest

distances. Tesla believes that his recent experiments lead him to the hope that with a suitable plant wireless electrical communication can be set up between the old and the new world. His system consists in producing electrical vibrations of enormous frequency which are received by a transmitter and intensified and sent to the earth, whence they flow in every direction. A receiver set up at a particular place and adjusted so as to correspond to the transmitter in vibration frequency, picks up the vibrations and intensifies them and these become decipherable. At any part of the globe therefore these vibrations can be picked up and deciphered provided there is a suitable receiver.

#### HOW WATER ASCENDS IN PLANTS.

At one time, says the *Journal of Horticulture*, there was considerable difference of opinion as to the course pursued by the sap of trees in ascending from the roots and that followed by the food materials elaborated in the leaves when being transferred to the various portions of the tree in which their process of growth was in progress. It has now been established that all the moisture required by the tree or plant for its existence and growth is taken up by the roots, and that the water so absorbed is conveyed to the higher regions through the medium of the woody part of the stem. On the other hand, the food material elaborated by the leaves are conveyed to the various parts of the plant system by the bast tissues which immediately underlie the bark, and are ranged around the outside of the wood.

At the meeting of the Vienna Society of Physicians, on the 16th ultimo, Dr. Kienböck introduced a man 26 years of age, whose hair had been partially restored by the application of the Röntgen rays. He had been bald for some years. The cure, the Vienna correspondent of the *Standard* says, was effected in the following way. A round patch on the scalp was subjected six times to the influence of the rays for 15 minutes, and during the two months the treatment lasted the man regained his old thick, dark-coloured hair on the parts exposed to the action. The parts not yet treated remain as before. During the discussion which followed, several members expressed doubts as to whether Dr. Kienböck has really found a remedy for baldness; but he was encouraged to continue his experiments, and invited to report on them to the Society at a later date.

# THE INDIAN REVIEW

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## The Indian Review.

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The article on this subject by Mr. G. Subramania Aiyar, the late editor of the *Hindu*, which we publish elsewhere, deserves to be read with attention. He sets forth the present unsatisfactory economic position of the country with clearness, and makes a strong plea for developing the material resources of the land with a view to increase the non-agricultural wealth of the country.

In his recent speech on the Budget in the Supreme Legislative Council, His Excellency Lord Curzon said that when, owing to certain laws of nature, the agricultural income of the country ceased to expand, the Government could not usefully try to combat the laws of nature, but should wisely increase the country's non-agricultural sources of income. With a view to increase such sources of income, the Viceroy would tempt British capitalists to exploit the country. Lord Curzon said :

"It is for this reason that I welcome the investment of capital and the employment of labour upon railways and canals, in factories, workshops and mills, in coal mines, and metalliferous mines, in tea and sugar and indigo plantations. All these are fresh outlets for industry, and they diminish *pro tanto* the strain upon the agricultural population."

It is against this policy of employing foreign capital for the industrial regeneration of India, that Mr. Subramania Aiyar emphatically protests. The evils of the introduction of foreign capital for the purpose mentioned are many and we refer the reader to Mr. Aiyar's remarks on the subject. We will only repeat what has been said a hundred times that the employment of foreign capital only enriches the foreign capitalists and perpetuates the helplessness of the people. The true and just method of promoting the industrial development of India is to once for all give up the idea of "bribing" foreign capital and for the Government to realise their responsibility and "provide every facility for the growth of indigenous capital and for the application of that capital by indigenous agency." This is the policy which one has a right to expect from a Government which is styled paternal and yet we are sorry to note that a responsible head of the Government of India like Lord Curzon should publicly offer the premium for foreign capitalists to exploit India.

## THE LAND QUESTION IN MADRAS.

A variety of administrative questions presented themselves to the new rulers of India at the close of the eighteenth century; but none of them was so deeply interesting in itself, or touched the welfare of the people so intimately, as the Land Question; and in no part of India did the Land Question present itself in such varied forms as in Madras. For, in Bengal, the Zemindari system dominated over other systems; in Northern India as well as in the Deccan, the Village-community system was widely prevalent; and in other parts of India, peasant proprietors paid the revenue direct to the State. Madras, on the other hand, was a microcosm of the whole of India, and preserved the three systems in their integrity and in their rich variety such as would have delighted a student like Sismondi or Mill, a Lavelaye or Sumner Maine,—but such as puzzled the bewildered servants of the East India Company! Let us take up the three systems one by one.

I. The Zemindars of the Northern Circars, the Polygars of the South, and the Hill Rajas of the backward tracts, were great landlords, exercising some of those ruling powers which belonged to territorial lords in the olden times.

II. The Mirasi villages of the Karnatic were village-communities, holding the village lands in common, dividing them among tenants from time to time, and paying their quota of revenue to the State, like little self-governing fiscal republics.

III. Lastly, where fighting Polygars had not established themselves, or the Mirasi system had not developed itself, tenant proprietors cultivated their broad acres and paid their revenue direct to the State.

With regard to the first system, a somewhat summary procedure was adopted at first. The Polygars who were a thorn at the side of the Nawab of the Karnatic were crushed with the help of his British allies. The Court of Directors were alarmed; they sympathised, and they pro-

tested, but all in vain! "The native princes" they wrote, "called Polygars should not be extirpated." "It was repugnant to humanity," they exclaimed, 'to force them to such dreadful extremities as they underwent.' But the authorities in Madras could smile at these pious regrets, and the effete Nawab of the Karnatic merrily went on with the game of extirpating the Polygars! The turn of the Karnatic itself came next; and on the death of the Nawab the whole kingdom, now freed from troublesome Polygars, was after some formalities annexed by Lord Wellesly in 1801. The more peaceful Zemindars and Rajas of the Karnatic had met with a better fate; under the orders of Lord Cornwallis a permanent settlement had been made with them.

The second and the third systems have a more memorable history. Which of them was the original institution of the country? Which of them was to be fostered under the British Rule? Which of them would pay best to the East India Company? Opinions were divided, and a controversy, which is perhaps the most memorable in the annals of British administration in India, arose between the Madras Board of Revenue, the champion of the Village system, and Thomas Munro, the champion of the Ryotwari system! Debaters in those days wrote strongly and unreservedly; and some portions of the debate are lively reading to present readers.

Thus spoke the Madras Board, the champion of the Village system: "To fix a land-revenue,—not on each province, district, or country, but on every separate field in their dominions! In pursuit of this supposed improvement, we find them intentionally dissolving the ancient tie which united the republic of every Hindu village, and by a kind of agrarian law, newly assessing and parcelling out the lands which from time immemorial had belonged to the village community collectively, not only among the individual members of the privileged order but even among the inferior tenantry; we observe them ignorantly denying, and by their de-

nial, abolishing private property in land, professing to limit their demand to each field, and in fact, by establishing for such limit an unattainable maximum, assessing the ryot at discretion; and like Musalman Government, which preceded them, binding the cultivator by force to the plough, compelling him to till land acknowledged to be over-assessed, deferring their demands upon him till his crops came to maturity; then taking from him all that could be obtained and leaving to him nothing but his bullocks and seed grain; nay perhaps obliged to supply him with these, in order to enable him to resume his melancholy task of toiling for others."

But all this protest, all this condemnation of the real oppression which the Madras cultivators suffered in the early days of the Ryotwari system, was in vain. Thomas Munro appeared as a witness before the House of Commons Committee, enquiring into the affairs of the East India Company in 1813, and he gave his evidence clearly and forcibly in favour of the Ryotwari system. He induced the Court of Directors to sanction that system, and as Governor of Madras he established that system as the prevailing system in Madras. The Village system was swept away, even like the Polygars of old.

In justice to one of the most benevolent administrators who ever went out to India, it should be added that Sir Thomas Munro, as Governor of Madras, reduced the original oppressive assessments, and laboured to carry into effect his idea of making a *Permanent Ryotwari Settlement* in Madras as a *Permanent Zemindari Settlement* had been made by Lord Cornwallis in Bengal. His memorable minute of 1824, one of the ablest minutes ever recorded in India, is at once an answer to the arguments of the Madras Board of Revenue, and a vindication of the Ryotwari settlement on a permanent basis.

Thus spoke the champion of the Ryotwari system: "All the lands of Arcot were at one time held, according to Mr. Ellis, under the joint or

*Samudayem* tenure. This tenure has been much praised by some revenue authorities, and its breaking up into the separate individual or *Phala bhagam* tenure has been regarded as a calamity for the country. The happy state of the natives in the joint tenure villages is not supported by the fact of most of them having long since adopted the separate tenure. When this change took place is not known; but it was probably the gradual work of time, long before the Company's Government. \* \* \* \*

"But the question regarding *Meeras* is one rather of curiosity than of real utility; for in most districts the *Meeras* is worth little, and was no value that might not be easily given to the lands in every province by a moderate reduction in the assessment. It is much more important to ascertain how this moderate assessment is to be generally introduced, and private landed property reared upon it, than to seek to trace the origin and the fluctuations of the *Meeras*. \* \* \* \*

"In order to make the land generally saleable, to encourage the Ryots to improve it, and to regard it as a permanent hereditary property, the assessment must be fixed."

Such was the solution of the Land Question in Madras proposed by Sir Thomas Munro with his unrivalled knowledge of the land tenures of the Province, and his unrivalled experience of more than forty years among the people of that Presidency. He objected to the extension of the Zemindari system where Zemindars did not exist; he objected to foster and revive the Village community system which was decaying; he made the Ryotwari system the prevailing system of Madras; and he decided on making a *Permanent Ryotwari Settlement*, as a *Permanent Zemindari Settlement* had been made in Bengal. For forty years after Sir Thomas Munro's time, the Government of Madras adhered to the principle of a *Permanent Ryotwari Settlement*; and I have elsewhere\* given extracts from official records showing that the Madras Board of

\*Famines and Land Assessments in India, pp 165 to 169.

Revenue considered the Madras ryot entitled "to retain his land in perpetuity without any increase of assessment"; and that the Madras Government held in 1862 that "one fundamental principle of the Ryotwari system is that the Government demand on the land is fixed forever."

It is scarcely necessary to add that the Madras Government have since receded from this position. They do not now consider the Madras ryot entitled to retain his land in perpetuity without any increase of assessment, but takes care to revise that assessment at each recurring settlement. The solution proposed by Sir Thomas Munro over 70 years ago has not been accepted; the protection which was promised to the most patient race of cultivators on earth, has not been given to them.

A compromise was proposed in 1882 by the Marquis of Ripon, then Viceroy of India. He was unable to restore to the cultivator his right to retain his land at a permanently fixed assessment; and he was unwilling to subject him to arbitrary enhancements of that assessment at each recurring settlement. The compromise which he proposed was that, in districts which had been once surveyed and settled, no future enhancements should be made except on the equitable ground of a rise in prices. The Madras Government, be it admitted to their credit, accepted this compromise. The Secretary of State for India thought it fit to reject it in 1885.

And thus it happens that, after a century of British rule, the Land Question has not been solved in India, and the Madras cultivator is to this day a wretched and resourceless being, without adequate protections against arbitrary increase in the State-demand, and without capacity to save against years of drought, famine and death.

ROMESH DUTT.

## SUN-STROKE AND ITS PREVENTION.

NOW that it is the hottest part of the year in Madras, the subject of sun-stroke will appeal to and be of interest to all sections of the community. The title of this article shows what its object is, and the writer, who has been at some pains to study this subject, hopes that the perusal of this article may be the means of bringing certain facts before the readers of this magazine which may help to guard them from one of the many dangers that lie lurking around us in a climate such as that of Southern India.

Sun-stroke is the popular name for a condition to which the following synonyms have been given, namely, thermic fever, heat-stroke, heat-apoplexy, insolation, *coup de soleil* and lastly "*siriasis*".

The predominating ideas in connection with the condition under discussion are, first, that the sun is the cause, or *fons et origo male*, and secondly, that the result of the malefic action of the sun partakes of the nature of a sudden blow or stroke. Both of these ideas are correct and justify the application of the term sun-stroke to the condition under consideration, but it is still more important to remember that it is not merely the sun that produces or causes the stroke, but other and more preventible causes in addition.

Let us first see what sun-stroke means. It is a condition produced by excessive heat, the chief feature of which is nervous prostration. A far better term for this condition is heat-stroke, because although this condition may result from direct solar heat, it also follows exposure to heat without sunlight, and cases occur among individuals working in the shade and even at night. Various definitions have been given to the term sun-stroke, but the chief idea running through them all is that excessive sun-heat acting on the nervous system suddenly induces a condition that partakes of the character of a shock or stroke or blow. Moist heat is more likely to produce sun-stroke

than hot dry air. Hence cases of sun-stroke are more often met with in damp low-lying districts and near the sea coast, than on high dry tablelands. Under the expression heat-stroke or sun-stroke are included several distinct and opposite conditions, two of which stand out prominently. These are, first, heat-stroke without high bodily temperature and second heat-stroke with successive bodily temperature, or hyperpyrexia. The first of these, or heat-exhaustion, is virtually a syncope, that is to say, it is characterized by a great weakening of the heart's action, and it may occur anywhere and in any climate, high atmospheric temperature being the chief causative factor. The other condition is marked by excessive bodily temperature or hyperpyrexia, and is often accompanied by convulsion. This form of sun-stroke has such well-defined and characteristic features that many high medical authorities look upon it as a specific fever occurring endemically in certain localities assuming sometimes the nature of an epidemic. To this particular form of sun-stroke the name of siriasis has been given, the word "siriasis" taking us back to the old times when this condition was supposed to have some connexion with sirius, the dog star, sirius being in the ascendant during the hottest time of the year. This second form of heat-stroke occurs only in conditions of high atmospheric temperature, but as in the case of other tropical diseases such as Dengue Fever, Yellow fever, the fever of elephantiasis &c. it does not follow, that although it occurs under conditions of high atmospheric temperature, it is caused by high atmospheric temperature. In addition to the two well marked forms of sun-stroke just mentioned, there is another condition not so well marked or distinct, but nevertheless distinctly associated with high atmospheric temperature, and which to all appearances is due to exposure to the direct rays of the sun, to which the term sun-transmatism might well be applied. It is this sun-transmatism that is often res-

possible for the lamentable and pitiable nervous break-down that is sometimes seen in young men who have had what is commonly spoken of as a touch of the sun.

Having now a clear idea that high atmospheric temperature is the most marked cause of sun-stroke or heat stroke, let us see what, if any, are the other causes that help to produce this condition. To understand how these causes act, we must consider briefly the effect that excessive heat has on the nervous system and how it is that nervous prostration which is such a marked feature of sun-stroke is produced. In health the maintenance of a normal temperature involves three co-operating factors, (1) a source of heat (2) channels for the discharge of heat; (3) a regulating mechanism which shall maintain a stable balance between heat production and loss of heat. If this most wonderfully adjusted and delicate heat-balancing mechanism is in proper working order (as it always is in a state of health) any variations or differences between heat production and loss of heat are immediately compensated for, and so the temperature of the body as a whole is not affected to any appreciable extent. It has been shewn experimentally that during fever the variations of the two processes are no longer independent--in other words, the regulating mechanism is out of gear, and it is this "being out of gear" plus the elevation of the surrounding atmospheric temperature that produces the phenomena of sun-stroke. Under ordinary circumstances, the healthy human organism can support, without sustaining any harm, very high atmospheric temperature if not clogged and hampered in the discharge of its normal functions by excesses of various kinds, such as eating or drinking too much, taking violent or prolonged exercise, wearing unsuitable clothing, overstudy or prolonged and concentrated mental effort, or any cause or combination of causes that tend to impair or depress its physiological activity. When, however, this physiological power has become weakened or



depressed by disease or conditions departing from those of health, such as, malaria, heart and kidney disease, brain or liver disease, fatigue, living in badly ventilated rooms, and especially by alcoholic excesses and by those that cause exhaustion of the nervous system, then, high temperatures can be hardly sustained and as a result the nerve supply to the heart known as the cardiac ganglia is directly affected and syncope is the result. Further, a profound impression is made upon the general nervous system and especially on that part of it known as the "vaso motor" nerves, that is to say, the nerves whose function it is to control and adjust the circulation of the blood throughout the whole body. Consequently, it is found that in deaths from ordinary sun stroke, the blood is dark looking, more like venous blood, and indeed the whole venous system is found to be engorged, that is to say, it contains more blood than would be the case if the adjusting apparatus of the circulation—the vaso motor system—were working properly. A feature of this dark blood is that, on analysis, it is found to contain less oxygen and more carbonic acid gas than it does when healthy and it is to this excessive amount of carbonic acid gas which renders the blood impure that the tendency to convulsions seen in some cases of heat-stroke may be attributed.

There are many speculations and theories as to exactly how the phenomena of sun-stroke are produced. Amongst these may be enumerated the following:—superheating of the blood by high atmospheric temperature: paralysis of the heat-controlling nervous centres causing over-production of heat, or retention of body heat, pressure in the brain by expansion of the cerebro spinal fluid due to heat, paralysis of the vaso motor system, paralysis of the nervous supply of the heart, excess of carbonic acid in the blood, and failure of the skin to perspire, due to interference with its blood supply caused by vaso motor paralysis.

Sun-stroke cannot be due entirely to the actual heat of the sun because the characteristic phenomena of sun-stroke do not result from exposure to the heat of a furnace however hot. Heat no doubt is the prime factor but, inasmuch as the rays of the sun have been proved to have some definite chemical power, as seen in the solar spectrum, capable of injuriously affecting the tissues, it is to this special element in the solar rays that the power of producing sun-stroke must be attributed. The difference in the sensation produced by exposure to a hot fire and by exposure to strong sunlight points to this and as a point further bearing out this, the fact that the Rontgen Rays have taken a recognized place among the agents used in the treatment of skin disease may be noted with special interest.

All that has been said about sun-stroke or heat stroke applies also to the condition known as siriasis, with this exception that siriasis has well marked geographical limits. Sun-stroke can occur in any part of the world where the temperature is high, but according to Sambon, who is a great European authority on this subject, siriasis is rigidly confined to certain low lying sea-coast districts and to the valleys of certain rivers. It is never found in high lands, nor above a relatively low altitude of 600 feet above sea-level.

Siriasis is unknown in Europe. In Africa it occurs in the valley of the Nile along the Red Sea Coast and a certain low lying valley near Algiers. In America it occurs along the East Coast of the United States and the South Atlantic Coast and all along the valleys of the great rivers, and in Australia along the valley of the Murray River and the portions of the Queensland Coast. In Asia it occurs in Syria and in India the disease is found in the valleys of the Indus and Ganges and Lower Burma. It also exists in the Madras Presidency and the writer has seen one fatal case in Madras itself. The chief distinguishing feature that marks a case of siriasis is the fact that excessive bodily temperature, hyperpyrexia, is always present. In sun-stroke there may or

may not be elevation of bodily temperature and even when the bodily temperature is raised, it never runs up to the height that it does in siriasis. Older writers on this subject, principally, military medical men who practised medicine in India, applied the name of Ardent Continued Fever to a condition which corresponded very closely to what we now know as siriasis. Another fact connected with siriasis and distinguishing it from sun-stroke is that it is very often preceded by a prodromal stage or, more simply, a warming stage. This stage may last only a few hours or it may precede the sudden seizure by as long as two days, and is characterized by certain well marked symptoms such as pain in the limbs, headache, vertigo, thirst, great depression of spirits, nausea and sometimes vomiting, a hot dry skin and a quickened pulse. One curious symptom is often noticed in this prodromal stage and that is a hysterical tendency in men to weep. When the attack is developed the intense burning heat of the skin is one of the most marked features. The degree of heat registered by the clinical thermometer reaches 108 or 109 degrees, and in the case seen by the writer in Madras and which occurred in the month of June last year, the temperature registered was 111½ degrees, that being the extreme limit of the scale marked on the instrument.

In the condition to which the term sun transmatism has been applied, the phenomena are attributable to a peculiar physical action of the direct rays of the sun on the tissues. In some cases long exposure to the sun brings on fever—this fever is sometimes of great severity and partakes of many of the characteristics of inflammation of the brain. The acute symptoms often subside quickly and are likewise often followed by various morbid nervous symptoms which in their turn may pass off quickly or may persist. Among the nervous symptoms following an attack of sun transmatism may be mentioned nervous tremblings, loss of memory, blindness, deafness, epilepsy, insanity, persistent

headache, recurrent headache, dyspeptic symptoms and sensitiveness to heat or exposure to sun.

Having now some idea of the various conditions that are caused primarily by the heat of the sun, we shall turn our attention to some of the precautions necessary to be observed in order to avoid the danger of an attack of sun-stroke, or a touch of the sun; and the first thing to be remembered is that as long as we do not, by our folly or ignorance, interfere with and hamper the natural resisting power that every healthy individual possesses we have a powerful and efficient protection against the dangers of sun-stroke.

Apart from actual disease of important organs such as the heart, liver and kidneys &c., there are conditions brought about by excesses of various kinds, that for the time being produce a profound impression on the system generally, the result being a great lowering of the innate resisting power referred to above. Amongst these excesses, the principal ones are over-eating, alcoholic intemperance and nervous exhaustion.

In over-eating, or gluttony the excessive consumption of food overtaxes the digestive powers and throws a great strain upon the excretory organs. As a result, the work is not properly carried out and a number of deleterious products from imperfectly digested food circulate in the blood, which is thus rendered impure. This impure condition of the blood results in the lowering of the general physiological resisting power and hence a weakening of the principal factor in our defence against sun-stroke &c. Therefore, one of the safeguards against sun-stroke is to avoid over-eating, and especially to guard against excessive consumption of animal food.

Next comes the question of drinking. Water which is the basis and foundation of drinks of all kinds plays a most important part in supplying to the body the loss of fluid which occurs as the result of profuse perspiration in addition to the other methods whereby a certain amount of fluid is passed out of the body with the excreta. It assists the various excretory organs in their work by rendering the different products of metabolism they are called upon to deal with more amenable to their powers. It is therefore good to drink fully of pure water. This is in contrast to the effect of alcohol, which is an irritant whose regular consumption as a beverage tends to retard and hinder the excretory organs in the discharge of their functions, thus producing, as in the case of over-eating, only in a different manner, the depression of physiological power which is to be looked upon as the first line of defence against sun-stroke. There is a definite and well

marked relation between the excessive consumption of alcohol and the danger of sun-stroke. This applies equally to Europeans as to natives. The Negro is believed to be exempt from sun-stroke and the question arises as to whether the natives of India enjoy the same immunity. In the opinion of the writer of this article, there is no doubt that the native of India is not as susceptible to the effects of the sun as the European, but the European can, by living a healthy life and adapting his method of living to his surroundings, regard his supposed liability to be affected by the sun with equanimity. It is probable that tropical heat seldom, if ever, kills any one in whom some other cause has not produced either blood poisoning or great exhaustion of nerve force. In India, the drunkard, be he European or native, has to struggle against these states in combination. I have noticed that cases of another disease produced by excessive consumption of alcohol, viz., *Delirium Tremens* as a rule are treated more successfully and with better results in the cooler months of the year. But those cases which happen in the dog days and hot months such as May and June are nearly always fatal.

Norman Chevers whose opinions on this subject carries great weight says:—"Numerous as the constitutional causes of heat stroke are, all Indian experience combines to show that drunkenness is the chief"—this applies not only to sun-stroke but also to all those cases that can be grouped under the heading, sun transmatism. To show that the connection between alcoholic intemperance and the ardent continued fever (which corresponds to what is now known as *siriasis*) of the older writers was well recognized, the following passage taken from Dr. James Ronald Martin's Book entitled the "Influence of Tropical Diseases on European Constitutions" and published in 1856, will be interesting. He says:—

"A very interesting report by Dr. Miligan of 63rd Foot shews that symptoms like those of ardent continued fever resulted from the exposure of his corps to the sun during a military funeral at Madras. The greater number of the men, he says, were in the prime of life: but there were among them some old soldiers who had served twenty years and upwards, some of it in the West Indies, and were much broken down by service and intemperate habits. The entire corps had just arrived from the Australian Colonies, where spirituous liquors can be had on easy terms." The regiment landed at Madras in the month of May and from the date of the untoward circumstance of the funeral, the hospital became filled with cases of fever. Two men dropped down and died on the very day of the funeral and for several days afterward the fever cases augmented considerably."

In those days the leading feature in the treatment of these cases was copious blood-letting,

and we read of bleeding to the extent of fifty, sixty and even a hundred ounces, but alas! the remedy was worse than the disease!

Alcoholic intemperance, then, is always to be looked upon as being the great ally of tropical heat in producing sun-stroke and its allied conditions.

As has been pointed out above that intangible and immeasurable "something" to which we apply the term physiological or vital force is our great safeguard not only against sun-stroke, but also against disease of any kind. This force is by its nature a nervous force, and, we can only see its result in the energy with which the intricate and delicate functions of the healthy organism are carried on. Consequently it can be readily conceived that anything that exhausts or tends to exhaust the nervous system at large must injuriously affect this physiological force which is our great safe-guard.

The commonest causes of nervous exhaustion as seen in this country are prolonged and concentrated mental effort under unsuitable conditions, such as bad or unsuitable food, unhealthy surroundings such as living and working in close, ill-ventilated rooms, and when to this is added the consumption of more or less alcohol to act as a spur to the flogging energies, all the factors for the production of nervous exhaustion are present.

Now as to prophylaxis or guarding against sun-stroke, first and foremost is the avoidance as far as possible of exposure to the direct heat and rays of the sun. Suitable clothing should be worn and in the case of Europeans the precaution of wearing suitable head coverings should be observed. A red lining to the ordinary sola topee is an additional protection, as red as a color, has the power of absorbing and taking up some of the sun's rays thus reducing their power. The daily bath by keeping the skin clean tends to a healthy condition and this is a *sine qua non*. Excesses of any kind, either in eating or drinking, more especially in the consumption of alcoholic liquors and tobacco should be avoided. Excessive fatigue either of body or of mind should be avoided, and any condition that tends to produce nervous exhaustion should be carefully guarded against. The words of Falstaff, the immortal, are pregnant with wisdom.

'Purge, forswear Sack,  
And live cleanly.'

This is a rule of life which, if it were more generally lived up to, would guard us all against many ills and evils, besides sun-stroke.

H. W. McCauley HAYES.

Member of the Royal College of Physicians,  
Edinburgh.

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## THE LITERATURE OF THE VICTORIAN AGE.

AMONG the platitudes of criticism two may be noted as applicable to the present subject. The first is that periods of literature, though they may be named Elizabethan or Victorian, sixteenth century, or nineteenth century, do not synchronise with the limits of monarchs' reigns or with the closing of the centuries. The second is that proximity to the object viewed renders a full and final estimate of its relative value impossible. Thus, we cannot at the present time foretell with any pretence at finality the place that the majority of our Victorian writers, and especially those of the later decades, will yet occupy in the history of English literature or pass an unchallengeable judgment on the literary work of the period. As the long reign has passed by, however, it has become increasingly possible to predict who among the earlier Victorian writers are likely to remain as classics, when the resistless hand of time shall have remorselessly sifted the chaff from the wheat. Much of the writing of the reign has been useless. Tens of thousands of volumes have been published since 1837, but even already the vast majority of these lie buried in the darkest oblivion.

In giving a general survey of the literature of the Victorian period we notice that the epoch is in some measure marked by the ebb and flow that is characteristic of the history of literature throughout the centuries. It has its period of fertility and brilliance as well as its time of comparative stagnation, and yet unlike previous epochs at no time has inspiration altogether ceased.

The birth year of Queen Victoria fell in the very middle of one of the most glorious periods, though one of the briefest, in English literature, the period extending from 1816 to 1823. During those eight years were published some of the finest works of that

most brilliant galaxy of writers, Miss Austen, Lamb, Wordsworth, Byron, Coleridge, Keats, Shelley and Scott. To these years belong *Northanger Abbey*, the *Essays of Elia*, the *Excursion*, *Don Juan*, *Christabel*, *Endymion*, *Prometheus Unbound*, and at least eighteen, and these among the best, of the *Waverley Novels*, not to speak of a large number of other hardly less important works. These years we can see now marked the flood-tide of the most creative period of the nineteenth century. From that time on to 1837 when the young Queen ascended the throne it may be said, with certain reservations, that the spirit of literature steadily lost its vitality, as one by one the great masters laid down their pens and passed to other worlds than ours. From the year 1823 to the year of the Queen's accession was a period of deaths and births but not of literary productivity. At the beginning of that period Keats and Shelley and Byron died. Eight years later passed away the Wizard of the North; in 1834 Coleridge and Lamb died and of that brilliant company only Wordsworth lingered on, a man approaching his three score years and ten. And yet those years of the ebbing tide, so fatal to the most brilliant of our early nineteenth century writers, were years of preparation for a second flood-tide hardly less notable than the first. Among those who were born during the infancy and girlhood of the Queen and who were to rise to eminence during her reign were Charles Kingsley, and John Ruskin, George Elliot and George Meredith, Matthew Arnold, and D. G. Rossetti, William Morris and Charles Algernon Swinburne. Older than these, for the most part in their boyhood and early manhood, during these years of literary stagnation were Carlyle and Macaulay; Tennyson and Browning, Thackeray and Dickens, the men who beyond all others were to be the glory of the Victorian age.

The year 1837 may be regarded as the beginning of the second creative period of the nineteenth century. In that year Dickens published *Oliver Twist*, the work that brought him into popu-

larity. Thackeray wrote his first work, the *Yellowplush Papers*, Carlyle published the *French Revolution*, Browning, *Strafford*, and Bulwer, *Ernest Maltravers*. From this year onward for over thirty years the stream of literature flowed with considerable vigour. Let us choose, practically at random, any one year of the period, say 1849, and see what permanent contributions it has made to literature. In that year Ruskin published his *Seven Lamps of Architecture*, Kingsley, *Alton Locke*, Browning, a volume of *Poems*, Thackeray, *Pendennis*, Dickens, *David Copperfield*, Charlotte Brontë, *Shirley*, Clough, *Ambarvalia*, Aytoun, the *Lays of the Scottish Cavaliers*, while Lytton completed the *Clactons*, and Freeman, Leigh Hunt, Douglas Jerrold and Harriet Martineau made valuable, though perhaps less permanent additions, to literature. It was during the first three decades of Victoria's reign that these and other great writers contributed what is likely to be the most enduring monuments to their genius. During the last thirty years while it is true that some of the most brilliant works of the century in science, history and philosophy have been published, yet speaking broadly it may be asserted that, with the exception of some novels of Hardy, Stevenson and Kipling, and a few volumes of essays by masters of style like Matthew Arnold, Walter Pater and others, the tide of literature proper has been slowly ebbing backwards. The turn of the tide would have been more marked but for the longevity of a few of our most distinguished writers such as Carlyle, Ruskin, Browning and Tennyson, combined with the remarkable fertility of their genius. It is a significant fact that when Tennyson, the last of these, died, every one felt that amongst the younger writers no one was in any measure worthy to wear the laurel wreath that fell from his brows.

In giving a brief survey of the literature of the Victorian period it will be fitting to begin with the novel, for, beyond all doubt, the novel is as markedly the feature of the Victorian age as the drama was the feature of the Elizabethan.

Prose fiction is the mould into which the vast majority of writers during the past six decades have instinctively poured the thoughts they have desired to give to the world. Writers have prognosticated its decline, but from 1837 to 1901 there has been no material abatement in its popularity. Indeed if one may judge from the literary reviews of the day it grows more and more the form in which the thoughts of the time find the most acceptable expression.

The Victorian novel has reflected every phase of thought that has dominated any prominent section of the community; it has exhibited the social condition of every class, it has held up as in a mirror the overmastering passions of men, and it has discussed and analysed the ever-shifting political life of the nation. We have had novels of simple domestic life, and novels popularising great historical epochs, novels delineating the life of our provinces, and novels picturing the social conditions of our colonies and dependencies, novels that advocate some philanthropic scheme, and novels that seek only the entertainment of the reader by artistic narration.

In order to comprehend the vast mass of literature included under prose fiction, it is desirable to divide the subject into two sections. There is, first, the great class of novels that seek to advocate no theory, to propound no views, but aim only at the artistic and successful telling of a story. In this class is included, among others, the whole series of novels that depend for their interest on the intricacy of their plot. The second class includes all novels written with some didactic purpose, whether it be the reconstruction of the life of some past period or history, or the combating of some social abuse, or the advocacy of theological or political views.

One of the most fascinating story-tellers belonging to the former of these two divisions is Wilkie Collins. Few novelists, if any, have excelled him in simple skill in the unfolding of an intricate plot though Marryat is very nearly his equal in his

wonderful tales of the sea. Marryat, however, has the additional gift of humour, a quality, which makes his stories always acceptable. A writer of the present day who on various grounds may be grouped in this class is Thomas Hardy, one of the most successful tellers of provincial tales. By some he is regarded as the first among living novelists, mainly on account of his perfect prose style, but his ethical standards are such as to prevent his attaining the place in the heart of the public which his genius might otherwise have secured. Of all the novelists who are simple romancers, there is none who has evoked a more tender regard in the minds of his readers than Robert Louis Stevenson. With him the love of his art is his inspiration. He is essentially a craftsman. Unlike Wilkie Collins, his special talent lies not so much in the weaving of a plot as in creating a series of striking situations. With Stevenson we may name a still more recent writer of a similar type, though a less polished artist, Rudyard Kipling. For force of diction, vivid depiction of actualities and range of subjects he will be hard to equal in any age. Conon Doyle is eminently typical of this school, but it is doubtful whether his books will prove any more than a passing interest.

The novel writer is, however, in the main, seldom content to delineate for the sake of entertainment alone. The greater number of novelists belong to what, for brevity, we have called the didactic school; in other words they belong to that class of writers who write with the purpose of enlightening the public either in matters, social or political, or in matters historical or theological. Chief and first among those who in the reign of Victoria deal with social questions was Charles Dickens. Dickens' popularity has waned considerably because the conditions of social life which he sought to remedy are already things of a bygone age; but no writer has wielded a more powerful pen in working a reformation of social abuses. Another novelist of this class was Charles Reade, who successfully directed his energies towards the amelioration of life in prisons

and asylums. Mrs. Gaskell, Mrs. Craik, and above all Charles Kingsley, and at a later period Walter Besant were also writers of this school and helped to awaken the conscience of the nation to the presence of vast evils in the relationship existing between employers and employed.

Earliest among the writers of the historical novel in the Victorian period was Bulwer Lytton, a writer characterised by exceptional versatility and industry. There hardly exists a single field in literature in which he did not labour, but it is probably not untrue to say that if he excelled anywhere he excelled in *Rienzi*, the finest of his four historical novels. Two writers who depict provincial life in England, as it existed in earlier centuries, are Blackmore and Hall Caine. Blackmore gives us a picture of the Devonshire of two hundred years ago, while Hall Caine delineates ancient life in Cumberland and the Isle of Man. Perhaps the most charming novelist of this type at the present time is Stanley Weyman, a writer whose style is due in large measure to the influence of Stevenson. There are two other leading writers whom perhaps we ought to mention in this group, *viz.* Baring Gould and Andrew Lang.

We have already named Charles Kingsley and Hall Caine in another connection, but both of these may with equal fitness be also regarded as theological novelists. The writer, however, who may perhaps be looked upon as most typical of this school is George Macdonald, who for many years never wearied in his efforts to humanise the religious conceptions of his native land. One of the most subtle and most spiritual novels of its time was *John Inglesant* by J. H. Shorthouse, a book that, in the guise of historical romance, dealt with the religious and political problems of the early seventeenth century, but like that of *Robert Elsmere*, the best known of Mrs. Humphry Ward's novels, its popularity was shortlived. We may predict for Marie Corelli's *Master Christian* a similar fate. The interest of the religious novel, like that of the social, is largely ephemeral, and ceases

when the problems to which they owe their conception lose their vitality.

So far we have left unnoticed four of the most brilliant novelists of the Victorian age, Thackeray, George Meredith, Charlotte Bronte, and George Eliot. Belonging to a group that may be called character novelists, they do not properly belong to either of the divisions into which we have grouped the fiction writers of the reign. Nevertheless, on account of the marked ethical purpose dominating their writings, they may, if we use the term in a comprehensive sense, be classed among the didactic novelists. Few writers have the qualities of charm and sincerity more marked than Thackeray and none have done more by character painting to satirise the vices and the shams and the follies of the upper classes of society. George Meredith is the novelist of the cultured classes. He is often obscure and difficult, yet he is exceptionally brilliant and possessed of remarkable skill in analysing character and motive.

One of the most marked features of the Victorian era is the position gained and maintained in all branches of literature by women writers. They have excelled as journalists, poets and historians, but, perhaps, nowhere have they gained more eminence than as character novelists. The two outstanding women novelists are Charlotte Bronte and George Eliot. We do not class Mrs. Humphry Ward with them, as it is yet doubtful whether her works will live.

In *Jane Eyre* Charlotte Bronte gives us a revelation of herself. For passion and intensity she has probably never been excelled in English literature. With more real power, however, and more genuine art George Eliot reached perhaps the first place among the novelists of the Victorian age. Almost all her writings, but particularly her earlier novels, are marked by the keenest analytical power, and the loftiest moral aims.

If space permitted, it would be easy to catalogue many others who in modern times have far surpassed in popularity nearly all those already mentioned

such as Black, Rider Haggard, Crockett and Seton Merriman, but in spite of the phenomenal circulation of their chief works, their permanence in the world of letters is even less assured than that of the least classical of the above writers.

Fiction has been given the first place in the sketch, because of its pre-eminence in the Victorian age but other fields of prose have been splendidly, if less assiduously, cultivated. Some of the most distinguished of our prose-writers have been specifically historians, and must be passed over in the present article. But there are two historians who have acquired a place amongst English classics, Macaulay and Carlyle. The former has left a lasting influence on the style, and the latter on the thought of his generation. When the Queen ascended the throne, Macaulay in the midst of his busy Indian life was sending home contributions to the *Edinburgh Review*, and gathering materials for his essay on Clive. The conception of the historian's duty has changed since the time of Macaulay. His romantic pictures are out of date. The historian of to-day is a specialist working within narrower limits and with more accurate and exhaustive research. In spite of criticism mainly from the point of view of the historian, Macaulay's prose is still regarded as a model of clearness and vividness. Carlyle's personality and moral force were so peculiarly strong that it will take long for his influence to die. His power was not so much due to the qualities of his style as to the imperiousness of his utterances, to his accurate historical perspective and to his dramatic and vivid portraiture. Chief among those we may call the æsthetic writers is John Ruskin, who, like Carlyle, but in the field of art and not in history, was a powerful preacher of truth, and of high morality. It is difficult to realise, so fresh does it seem, that the first volume of *Modern Painters* was published six years after the Queen began her reign. We owe Ruskin's noble prose to a condemnatory article on Turner in one of the *Reviews*. The

letter which Ruskin wrote to the Editor reproaching the matter and style of these critiques grew into a book of five volumes. Any comprehensive review of the prose writers of the age must necessarily include names like those of De Quincey and Christopher North, Newman, Mathew Arnold and Walter Pater, Hutton, Morley and Frederick Harrison, and the list might be prolonged indefinitely. While it is difficult to say whether any of these will live as Addison has outlived the eighteenth century or as Milton's sonorous prose has survived from the seventeenth, yet it may be safely asserted that many of the writers of to-day would have been classics had their lot been cast in another century.

A form of literature characteristic of the Victorian period is the periodical. Hardly had the nineteenth century begun its course when in 1802 came the first number of the *Edinburgh Review*, followed in seven years by the *Quarterly*. A few years later came Blackwood, and then *Fraser's Magazine*. These with *Chambers' Journal*, all emanating from Edinburgh were the leading periodicals that existed when the Queen ascended the throne. But soon after her accession *Macmillan* and the *Cornhill* appeared and then in succession the *Fortnightly*, the *Contemporary* and the *Nineteenth Century*, until in the present day their name is legion.

It may be perhaps the existence of the periodical that has engendered a desire for personal information, but be the cause of what it may, there has been in recent years a surfeit of biographical literature. We have the biographies of all sorts and conditions of men, men whose lives have a permanent value for the world, and men whose lives have none beyond the narrow circle of their family.

From the days of Mandeville onwards books of travel have always had a fascination for the English reader. The love of adventure and the appreciation of courage and heroism is the heritage of the British race. But no previous era, not even the Elizabethan, has produced such a variety of books

of travel, as the Victorian age. 'Scientific, religious and political enterprise has driven men forth into regions of the world hitherto unexplored, and the result is a rich legacy to literature.

We have not mentioned poetry as specially characteristic of the Victorian age, because in the comparison of the centuries this age is an age of prose rather than of poetry. But in so saying we are not to be understood as implying that the love of song has died out of England. Never since the days of Cædmon and Cynewulf have we been without our famous singers, and in the roll of English poets few names will stand higher than those of Tennyson and Browning. Tennyson is at once the most characteristic man of letters of the Victorian period and its most distinguished ornament. With him is always classed his great contemporary Robert Browning. These two writers with their combined influence extending throughout the whole reign are sufficient to defend the age from the charge of poetical barrenness. But it is a remarkable fact that but for these there would have been a marked deficiency in great poetry. It is true that Swinburne and Matthew Arnold, William Morris, Mrs. Browning and Clough, are in certain aspects far from ordinary writers. They appeal indeed to certain types of mind more deeply than even Tennyson. But that is due to their embodying more vividly certain passing phases of thought, and not to qualities that will insure permanence of influence. Contrast them with the poets that lived during the first thirty years of the century, and their place among the roll of the poets will be recognised to be only in the second rank. It is, however, in the particular field of the drama that the literature of the age is markedly defective. In nothing is the contrast between the Elizabeth and the Victorian eras so strikingly emphasized. Though many dramas have been written, and Browning's poetry is essentially dramatic in character, yet it is doubtful if even one Victorian drama will be read a hundred years hence. In other fields of poetry, however, in the lyric and the idyll, in narrative poems and in poet-



ical fancies the Victorian age, mainly through the influence of Tennyson and Browning will be ranked as comparatively productive. There are writers belonging to the last decade of the reign like William Watson, and Stephen Phillips whose ultimate place it is not easy yet to assign, but they have not yet proved that they will be in any true sense successors of the two poets whose names are so honourably associated with the history of Victorian poetry.

A rapid sketch like this hardly touches the fringe of a great subject, yet it may serve the purpose of reminding us of many to whom the empire is indebted for much of what is noblest and greatest in the thought and aspiration of the present generation. We have not touched on our growing colonial literature which, in spite of the overmastering interest of material pursuits in all our colonies, is steadily becoming a power; nor have we alluded to the far richer literature that has assumed such wide proportions in the United States. Yet so closely are the English speaking races interwoven that the literature of these diverse regions of the globe is one and the same. On a survey of the whole field, one cannot fail to be struck not merely with the enormous output, surpassing a hundred times over that of any previous half century, but also with the large number of writers, not indeed of the first rank, but of a very high order; and if the 'Victorian age will not be regarded as the most distinguished in literature, it must, in the very nature of things, occupy a high place.

And now in this rushing stream of literature, that has poured forth these sixty years from a thousand presses, is it possible to discover any distinctive qualities or characteristics? It is possible no doubt to lay our finger on an individual author and see in him the influence of some movement, just as we can trace the influence of the French Revolution on some of our early nineteenth century poets. Kingsley may show in his writings the effect of the Chartist movement, Carlyle, the influence of German philosophy,

Stevenson, a revolt from an excessive subjectivism, Tennyson, the reflection of modern scientific thought, but in all this we discover only the characteristics of an individual or the peculiarities of a school. A few years ago Dowden used to speak of the influence of democracy on Victorian literature. We question whether he would assign to it the same value to-day. At the present moment if we are justified in judging from the poems that ushered in the new century, the thought that is uppermost in the nation to-day is the glory of science, the triumph of mechanical invention and the vastness of Imperial expansion. But these also are but passing phases which leave their impress on individual writers, and that for only a brief period. The question is whether the Victorian literature as a whole will be seen by future generations to possess qualities that in any measure make it a unity. We speak with hesitation of the judgment of posterity, but we doubt whether in the judgment of the generations to come any marked unity will be discovered at all. In truth the most marked feature of the age is its extraordinary variety. The highest literature, that which is truly inspired is like the wind, "it bloweth where it listeth," it is but slightly influenced by external conditions but literature of a standard lower than the highest depends upon the law of supply and demand. Therefore, on the one hand the cheapening of paper through the removal of the paper duty in 1861 and, on the other, the spread of education throughout the masses have led not merely to an abundance of literature, but also to an amazing variety in type. It may, therefore, be the verdict of the future that the Victorian literature is a conglomerate, a period distinguished not for its unity but for its diversity in thought and style. Nevertheless, we venture to think that at least one characteristic will be found to prevail. It is the characteristic that we describe by the word ethical. The word is vague and often somewhat vaguely and comprehensively used, but in describing a writer as ethical, we mean that the tendency of his writing is

to inculcate fidelity to duty, to lead men to simplicity and earnestness of life, in short, that there is in his writings a tendency that makes for righteousness. The leaders in Victorian literature have been essentially ethical in aim and motive. They have been men and women of moral seriousness. In spite of much inanity in literature and frivolity in life, it is interesting that the English nation still values the ethical, and still worships at the shrine of the ideal. No doubt this high appreciation by the people of that which is noble and true has been fostered by many influences and not least by that of the Queen and her Court, but it is permissible to believe that much of the inspiration towards noble and worthy living has come from the lofty ethical quality of our finest Victorian literature.

GEORGE PITENDRIGH.

#### MUSINGS BY THE RIVER-SIDE.

It was a glorious evening. The air  
breathed balmy fragrance from the neighbouring  
grove  
so sweet with vernal bloom. Full to the brim,  
broad Tāmravarni rolled with stately grace  
its depth of waters to the distant main.  
Along its bank, a village snug and small  
lay smiling midst green fields of waving corn :  
A lovely spot whereon the setting sun  
With magic fingers spread a quivering sheet  
Of molten gold. A lively troop of boys  
Were romping home, their day's work o'er in school;  
And village maids with guileless laughter, joked  
Each at the other's cost, as home they sped  
With jugs of water poised on their hips.  
The consecrated chant of Vedic hymns  
That from the village rose the listener's mind  
Bowed imperceptibly to holy thoughts  
Well-suited to the sober grey of eve  
That stole apace upon the landscape round,  
Which late had with the anthem sweet of birds

Resounded. Proud among the houses stood,  
Rearing its ancient roof above the rest,  
The storied mansion of the village squire,  
Whose beetling windows overlooked the flood.  
A radiant form that shone like beauty's self,  
And glistened with golden light of grace,  
Was from an open casement looking down  
Upon the flood with meditative eyes.  
It was Visalakshi, the squire's young wife.  
Who, like the bride of Vedic hymns, had girt  
Around her spouse a zone of sugar-cane,  
That but one spirit in them both might dwell.  
Her glances shy, her face as smooth as balm,  
The curving bow of her sweet rose-bud mouth,  
Her winning smiles, her tongue that at the tip  
And at the root delicious nectar had,  
In sweetest thralldom held her loving spouse  
Who wholly yielded to her wish and will ;  
And as Narayana His Lakshmi holds,  
He ever in his bosom harboured her.  
Among the village maids and matrons old  
She like an angel moved, and to their wants  
With loving tenderness she ministered,  
And by her sweetness and her sympathy  
In their afflictions brought them light and joy.  
What troubled now her gentle breast, and  
turned.  
Her joyous visage sad as there she stood  
In meditation, gazing at the flood?  
Behind the beaming radiance of her smile,  
A secret sorrow, which but few discerned,  
Lurked, making her in her lone moments feel  
Dispirited. The galling poverty  
That in its clutches held her natal home,  
Clouded the sunny brightness of her life,  
And threatened oft to choke it with its weight.  
As now she stood, with clouded brows and face  
Tear-stained, that in the gathering dusk appeared  
Even as the moon in winter, indistinct,  
She let escape a sigh surcharged with grief,  
That straight was borne upon the evening breeze  
And mingled with the sound of waters, filled  
The grassy hollows of the listening banks.

But not in vain her eyes the flowing flood  
 Had sought ; for nature to her wounded heart  
 Brought instant balm, and soothed her anguish sore.  
 Before her in mid-river kneeling lay  
 Like some huge elephant, against the tide,  
 A rocky mound, whose crest a clump of trees  
 With spreading branches rich in foliage bore  
 Safe from the lashing fury of the flood,  
 That dashed itself against the rock's bold front,  
 And impotently foamed in eddies round.  
 That little rock her sorrow slight assuaged  
 And in her breast revived her dwindling hope.  
 Eftsoons the music of her voice, more sweet  
 Than note of bird or chime of bells, was heard,  
 Her heart opprest consoling in this wise :—  
 "As yonder river ceaseless plies its force  
 Against that lonely rock that stands unmoved,  
 Repelling still the waters 'angry rush,  
 So dost thou, dearest brother mine, withstand  
 The cruel onsets of dire poverty.  
 To thee, poor soul, no smooth spot yet in life  
 Hath shown itself. Its roughness thou hast borne  
 With stubborn fortitude that saints austere  
 May well have envied. Oh, what fate is thine !  
 What cruel mockery that thou shouldst spend,  
 Despite thy knowing head and loving heart,  
 In plodding labour all thy anxious days,  
 And lazy clay-brained drones should, free from care,  
 Bask in the effulgence of Kubera's smiles !  
 With noble effort, 'gainst the galling pangs  
 Of grim penury, hast thou shielded still  
 Our aged parents and our sisters young  
 Who unto thee, as yonder clump of trees  
 To that resisting rock, for shelter cling.  
 God grant thee courage in thy trial sore,  
 And eke on thee bestow both strength and grace,  
 And bless thee, noble pillar of our house !  
 Let thine each suffering a fragrant flower  
 In that sweet chaplet prove that is in heaven  
 Reserved to crown thy well-deserving brows !  
 But sure my prayers cannot be in vain,  
 That to the Throne of mercy I have sent.  
 For He that erst responded to the wail

Of Droupadi in her distress, will He  
 That hastened at Gajendra's cry to save  
 The noble beast when once a gavial  
 Had snapped its hind leg with its vicious teeth,  
 Remain unmoved when I, a weakling, cry  
 With all the vehemence of my young soul  
 For gracious mercy for my suffering house !

So lose not heart, for all the cloud and storm  
 That have so long encompassed thee ; but feel,  
 My brother dear, as shadows cannot be  
 Were there no sun beyond, thy dire distress  
 Foreshadows but thy happiness in store,  
 Who plants the tree will water it himself.  
 So say our elders sage. God's children we,  
 And in His grace will He His children tend. "  
 She stopped, and nature's voice forthwith conveyed  
 The pleasing harmony of her sweet words  
 To where our prayers are heard ;—and as a sign  
 There rose the moon whose soothing fulgence  
 chased

The twilight gloom away, and with it too  
 All melancholy thoughts that filled the mind.

K. G. SESHIA AIYAR.

#### HER BEAUTY.

From splendours of the earth and sea and sky  
 I borrow similes to paint my sweet;  
 And yet, when all is done, most incomplete  
 The picture seems, whereat I only sigh:  
 Her every feature grows a mystery  
 That tempts the mind to trace it, but doth cheat  
 Its best endeavour ; till at her dear feet  
 I seek repose from task ! 'tis vain to try.  
 Ah, then I feel, as in a vision grand,  
 Ten thousand powers quicken my thought and  
 tongue,

To utter things more sweet than bards have sung ;  
 But as I clasp in mine her faithful hand,  
 My face with the warm heaven of hers o'erhung  
 In silence all her charms I understand.

JOSEPH SALDANHA.

## INDUSTRIAL REGENERATION OF INDIA.

**I**n the face of the gloomiest forebodings regarding the immediate future of the Indian people, raised by successive famines and by the alarming decrease in the growth of the population, the responsible rulers of the country do not courageously gird up their loins to combat the great problem of poverty, we have no hope that they will do so at any time. During the last twenty years, more especially since the year 1885, India may be said to have been under more or less a perpetual famine. Officials, no doubt, insist on a severe and acute test of a famine, but if high prices and scarcity of food, if the increase of destitution manifest in the crowd of beggars in every town and in the growth of crime, are tests of a famine in its real sense, then it can be truly said that, apart from the fifteen famines, officially recognised since the great famine of 1878, the so-called years of prosperity have given no relief worth the name to the famished population, and to-day, in spite of Lord Curzon's statement to the contrary, the agricultural and industrial classes of India are in a more depressed condition than they were previous to the famine of 1878. During these years crores of property have been lost to the people in consequence of drought and famine, and millions of men have disappeared, who, but for these misfortunes, would be alive and by their work would be the means of maintenance to hundreds of thousands of families. More than on the property of the people, on their health and vitality have famines produced disastrous effects. Our rulers, looking at the matter entirely from the point of view of their revenues, declare the famine to be over the moment that rains fall, and congratulate themselves on the recuperative power of the country immediately after the severest and most wide-spread affliction. But, as a fact, the famine does more harm by its after-effects than by its ravages during its actual career. As Mr. Vaughan Nash says :—

"Famine is not over and done with, when the rains are falling and the crops are being gathered in. The effect of months of privation cannot be summed up in the death-rate of the current year or the year that follows the famine. Fever sweeps away millions whose strength has been undermined, and the full effect of the birth-rate is not felt, until the time comes when in the ordinary course of things, the children who have died of hunger and famine diseases would have married and become parents."

This is the most serious aspect of the question, and those that take any interest in the economic well-being of this country should press it on the attention of Government who have shown no indication of their sensibility to the true enormity of this evil. It is a significant fact that during recent years fever and kindred diseases have contributed more to the mortality of the people than other causes. Mr. Mulhall says :—

"It is certain that an unhealthy nation has never yet been a prosperous one." "Sickness is a fearful tax in some countries, and is much increased, as in the case of Austria, (we may add, of India too), by the unwise duties on salt, a commodity of foremost importance for health. Salt duties on the continent vary from 4 pence to 28 pence per inhabitant, producing altogether 12 millions sterling per annum; if they cause 10 per cent. of the sickness, the loss in workmen's wages will be 18 millions sterling yearly."

When such is the case in European countries where the population subsisting largely on meat does not require much salt, much more serious must be the evil in India where the population almost entirely lives on vegetable food which, without a large quantity of salt mixed with it, is tasteless and unhealthy. Not only is salt consumed largely as an article of food by the people, it is also used for cattle, for manurial purposes, and for industrial purposes; and we are not sure that, when Sir Edward Law pointed to increased consumption of salt as a sign of recuperation of the people, he did not lose sight of the latter fact and forget that, in all probability, the increase was due to a larger use of the article for manurial and industrial purposes. At a time when people subsisted on the scantiest meal possible, it is impossible that they could have used more than the usual quantity of salt. There can be no doubt that the progressive deterioration in the vitality of the people and their consequent proneness to contract diseases and catch epidemics,

reduce their power for physical exertion and make them content with less food and less nourishment.

We do not know that any statesmen can contemplate such a state of things with equanimity and be content with a policy of drift. On the other hand, it imposes on them a most serious task, the task of devising and adopting measures which will increase the wealth of the country, will raise the agricultural and industrial classes above abject want, and will gradually bring about a strong wealthy and prosperous labouring-class, instead of the listless and reckless paupers that they are rapidly becoming, under existing circumstances. In his recent speech on the Budget in the Supreme Legislative Council, His Excellency Lord Curzon said that when, owing to certain laws of nature, the agricultural income of the country ceased to expand, the Government could not usefully try to combat the laws of nature, but should wisely increase the country's non-agricultural sources of income. But how did His Excellency propose to increase these sources of income?

"It is for this reason that I welcome", he said, "the investment of capital and the employment of labour upon railways and canals, in factories, workshops and mills, in coal mines, and metalliferous mines, in tea and sugar and indigo plantations. All these are fresh outlets for industry, and they diminish *pro tanto* the strain upon the agricultural population."

In other words, in order that the non-agricultural sources of income may increase, he would, as the head of the Government of India, offer every possible inducement for British capital to be sent to India for investment; and by the British capital being employed in the exploitation of every Indian source of wealth, his lordship believes, the strain on the agricultural population will be relaxed and the aggregate wealth of the country will increase. We emphatically deny that any such result will happen. It has not happened till now, and for all the investment of enormous British capital in all the ways indicated by the Viceroy, the agricultural and industrial classes of India are much poorer now than they were at the beginning of the third quarter of the nineteenth century.

To say that the people are not poorer is a mere begging of the question. Experience is against such a belief, and the burden of proof is entirely on those who maintain, in the face of recurring famines, uniform high prices, growth of disease, and decreased fecundity of the people, and numerous other signs of general indigence and deterioration, that the wealth of the country is increasing and the people are prosperous.

We admit that the most effective remedy for the poverty of a country which is mainly agricultural, is to increase its non-agricultural sources of income. But the only means of reaching this object is not to tempt foreign capital, but to provide every facility for the growth of indigenous capital and for the application of that capital by indigenous agency for the general industrial upheaval of the country. We are not aware of any instance of a country which has been raised to a high level of material prosperity by the employment of foreign capital to exploit its resources.

Other countries do borrow. But the foreign capitalist does not come with his money and employ his own agents and carry away the profits to his own country. In India this is exactly what takes place. It is not the State or the people of the country that manipulate the borrowed capital. Nor is the necessity for borrowed capital and the growing exploitation by foreigners looked upon as a temporary and avoidable evil. In other countries the State does every thing possible to replace foreign by indigenous capital and talent, and to dispense with foreign aid in the development of the country's resources. In India there is absolutely no indication that the Government regards this increasing foreign exploitation as a temporary evil and looks forward to a time in the early future when Indians will effect their own industrial regeneration.

In India the fact of the foreign capitalist belonging to the ruling race introduces evils of a political as well as economical nature. The foreign capitalist with his enormous resources is

able to crush, at the very commencement, every indigenous attempt made in rivalry with his own enterprise; and while, for the time being, increasing numbers of the Indian people come under servitude to the foreign planter, mine-worker, &c., by the time that the people may acquire the ability and competency to start and manage industrial enterprises, every opening will be closed to them by the ubiquitous ascendancy of the British capitalist. His presence and the influence he commands are always a menace to the political advancement of the people. He is often the near relation of some high-placed official, or high-placed officials enter into business partnership with him. His sons, nephews and other dependants, are smuggled into the public service to the serious injury of the natives of the soil. For the convenience and benefit of the capitalist, the interests of the people are frequently sacrificed, and a bond of mutual sympathy grows between this class of British settlers and the official hierarchy. Legislation, administration, and sometimes even the policy of Government are affected by a regard for the interests of the British capitalists. It is said that

"India needs foreign capital to enable her to throw aside those mediæval methods of production which still prevail in many branches of industry—to develop means of intercommunication in all directions and partly to educate the people themselves to store up capital. When the people have once got to see that the function of a surplus of income over expenditure is to be devoted to making the future happier, then, their own capital will grow, and India may be able to move fast ahead, somewhat as Japan has been doing lately, with less dependence on foreign aid. A check to the use of western capital in India at the present stage would be the greatest calamity that could happen to her."

We entirely dissent from this opinion. India would no more suffer from the present inroads of foreign capital being checked than other countries have suffered from want of foreign capital. Government can borrow whatever money it may require for the development of the country, and the gradual training of the people will in the long run enable them to accumulate capital and employ it in industrial enterprises. In fact, India at present is in as complete a state of subjection to England

industrially as it is politically, and so long as the present state of things lasts—a state in which the giant and the dwarf are left to compete with each other with perfect freedom, to expect India to be able at any time to beat her foreign rival, is to expect an impossibility.

It is not by the importation of foreign capital that the industrial regeneration of India can be accomplished. It is only the Government of India and such people as are in sympathy with the prosperity of British trade, that have unbounded faith in this method. When knowing men in other countries talk of industrial and commercial advancement, they emphasise other methods than that of bribing foreign capital, and the nations that have recently sprung into commercial and industrial greatness have not done so by adopting this particular method. These have entirely relied on the highest education and training given to the people, and the success they have achieved is marvellous. Very recently a remarkable article appeared in the *Commonwealth* by Otto J. Klotz regarding the backwardness of Canada and suggesting methods by which its progress can be brought into line with that of other countries, and, in his opinion, these methods consist entirely in the advancement of industrial and scientific education among the people. In agriculture and products of the dairy, Canada is well abreast of the times; but a good deal of nature's stores lies buried in the bowels, or slumber on the surface of the earth, and in order that Canada might utilise these stores for her enrichment, Canada must have recourse "to the application of the highest scientific skill and experience in developing natural resources and products." The writer advocates a system of technical education which

"will not be a mere continuation of the general education of a school system; nor akin to the manual training of schools; but which will be an education for specialists, for men who have chosen their vocation in life and who wish to perfect themselves solely for industrial pursuits."

In the conclusion of this article, this writer gives expression to a great truth which has of late im-

pressed itself strongly on the minds of the Indian people.

"We have spoken of the value of technical education more particularly with reference to our artisans and mechanics; but there is another and a higher field, that of research and discovery, which needs cultivation. Little or nothing therein has been done in Canada; we have been content, or, for want of funds, have been obliged to be content, with utilising scientific knowledge from outside sources, instead of having laboratories of our own, to disclose some of the secrets of nature and science for the benefit of man. We should be able to produce technologists capable of taking charge of large industrial works, where now foreigners are employed, and capable of directing capital to the creation of new industries."

We need not say how Germany—a model to the world in all matters relating to education—has solved the problem of industrial and commercial prosperity. In that country, industry and University education have gone hand in hand. The chemical industries in that country draw their chemists directly from the Universities; and in the Universities many discoveries of the utmost practical importance are made. As the writer in the *Commonwealth* to whom we have already referred says, the phenomenal industrial advance of that country within the past 25 years is wholly due to the co-ordination of science and industry, and we need not say that we entirely agree with him when he says that it is that co-ordination which must be the care of every nation which hopes to participate in the world's commerce, and at the same time preserve the home market. Recently a German Professor of great weight and authority has recorded his opinion that industrial and political prosperity does not depend on the accidental development of arbitrary forces, but on the earnest endeavours of a conscious purpose, based on a well-regulated and many-sided system of education and culture.

Great Britain herself, so long the world's workshop, is now learning to her cost that her old conservative ways in the matter of the nation's industrial and commercial training will ruin her, and is making amends for her supineness till now. The British nation is now awakening to a consciousness that this training is a matter of national concern and is pushing forward effective efforts to remedy this serious defect

in her system of national education. On what lines these efforts are directed will be apparent from the utterances of some of her foremost statesmen. The Duke of Devonshire, in an address to the students of the art and technical classes at Eastbourne, said:

"Foreign nations have anticipated us to a very great extent in realizing the close connection which exist between education and industrial and commercial success. That is a fact which is being brought home to us almost daily in various directions of the increasing competition to which we find ourselves exposed. The urgency of the question is coming to be recognized by practical men of business."

Last year a report on Technical and Commercial Education was presented to both Houses of Parliament. It had been prepared by a special Commissioner, who had visited various centres of industry on the continent. Among other things the Commissioner says:

"Can we in England ignore this wave of intellectual progress and regard with complacency any delay in the further development of technical and commercial training in all parts of the United Kingdom where trade and manufacture prevail? England should advance as a solid phalanx of artisans, tradesmen and merchants; each member trained in his respective sphere with a definite culture enabling him to grasp every problem, to utilize every invention, to produce the subtlest work."

The Earl of Rosebery and Mr. Joseph Chamberlain have both spoken emphatically on the paramount necessity of so revising the national system of education as to enable those engaged in industrial and commercial pursuits to pay Britain's rivals in their own coin. The Earl of Rosebery described the existing arrangements to meet this great national want "as insufficient," and "insular," and advised Chambers of Commerce and other wealthy representatives of the mercantile and industrial classes to imitate the example of Japan and send young men to other countries to be trained there in various branches of industry.

"That very ancient nation, the Japanese, of whom we have by no means yet seen the last or even the beginning in commercial matters, have long practised this system. The Germans have long practised such a system, and I confess I extremely rejoiced the other day to receive a letter from the manager of a great firm to say that they were sending 35 young men to whom they gave an allowance sufficient for their maintenance, to St Petersburg, where they remained for two or three years studying Electrical Engineering.

His lordship advised the Wolverhampton Chamber of Commerce as whose guest he spoke the above words, to "devote some money to some travelling scholarships of this kind which he was inclined to believe would produce fruit a hundred-fold." Speaking as Chancellor of the new University of Birmingham, on the next day, Mr. Chamberlain, gave expression to an important truth which is not always borne in mind by the rulers of this country. He said that the expenditure on primary education in its general and technical branches, though very properly incurred, could not be regarded as a commercial investment capable of bringing a good return. He said:—

I would remind you, that all history shows that progress—national progress of every kind—depends on certain individuals rather than upon the mass. Whether you take religion or literature or political Government or art or commerce, the new ideas, the great steps, have been made by individuals of superior quality and genius, who have as it were, dragged the mass of the nation up one step to a higher level. So it must be in regard to material progress. The position of the nation to-day is due to the efforts of men like Watt and Arkwright or in our own time to the Armstrongs, the Whitworths, to Kelvins and Siemenses. These are the men who, by their discoveries, by their remarkable genius, had produced the ideas upon which others have acted and which have permeated the whole mass of the nation and affected the whole of its proceedings. Therefore what we have to do—and this is our special task and object—is to produce more of these great men. It may be I admit, that this is impossible. It may be said that geniuses are born, not made. But there is one thing at least which we can do. We can multiply tenfold the number of those who are qualified to be the assistants and interpreters of these men, who can take their ideas and carry them into practical operation in the different walks of life to which they may devote themselves."

In another part of this address, Mr. Chamberlain pointed out with regret that in Great Britain the State did not spend sufficient money on higher education, whereas in America and Germany the State recognized that money expended for the purpose was the best of all possible national investments.

"I hope the time is coming," he said, "when our people also will recognize this fact and will see that what would be a mere drop in the bucket, as compared with our national expenditure, devoted to the highest education, would produce results of the most satisfactory and encouraging character."

There is no country in the world whose modern history furnishes such valuable and

extremely interesting object-lessons to India as Japan, which, within the last thirty years, has revolutionised her industrial conditions with an aptitude, courage, foresight, as marvellous as have characterised her political revolution. Before the Restoration of 1868, Japan was industrially in the same mediæval and backward state as India is at the present moment, but along with the political revolution an era of industrial revolution also was inaugurated, which upset her old indigenous system of industries. Japan's emergence from her isolation and her contact with the progressive nations of Europe, were accompanied by radical changes in the habits and tastes of the people, and the new craze for novelties and for European articles were such that the old class of producers were unable to supply the new demand. An industrial paralysis was brought about. The nation which from time immemorial was self-contained and self-dependant in regard to her industrial products, began of a sudden to import all things from other countries, from the costly implements of modern warfare and expensive machinery down to trifling food-stuffs and toilet articles. During the first ten years after the Restoration, the amount of annual imports exceeded that of exports, causing the wealth of Japan to be drained to foreign countries. Her statesmen were alarmed at such a state of things and forthwith commenced a series of measures which, within the following ten years, not only restored her industrial stability, but also enabled her industrial products to compete with European articles in foreign markets. "Something had to be done to turn the tide"—writes Count Okuma, a former Prime-minister of Japan, in a recent number of the *North American Review*.

"Either the political and social conditions had to be made to adjust themselves to the old industrial system or the industrial system to adjust itself to the new political and social conditions. The former meant retrogression, the latter progress. Consequently, recourse was had to the latter, with the determination that no obstacles, however great, should be allowed to hinder the nation's victorious march on the path of progress."

The measures that were adopted by the Japanese



statesmen to bring about an adjustment of her industrial system to her new social conditions are of the greatest interest to leaders of Indian economic thought. One of the earliest of these was to educate the people, grown up as well as young men, high officials as well as others. Officials were sent to European countries for the purpose of observing and examining their social, industrial and political institutions, with a view to transplanting to Japanese soil whatever promised to bear good fruit there. A great many students also were sent abroad to study the different branches of modern science. In Japan itself, educational institutions were established by the State, and Government itself established various factories without scruples as to financing and managing them, with a view to costly articles required for its own use. Meanwhile, the young men trained in foreign countries were available to co-operate with the capitalists, merchants and patriots of their country, in pushing forward the industrial upheaval of the nation. Japan has now passed the stage of doubt and trial, and she now entertains the ambition of rivaling England, Germany and America as a manufacturing country. Her natural resources are unlimited, and she has the inestimable advantage of a patriotic Government and patriotic people who know the wants of the country and pursue the means of supplying them with forethought, patience and undaunted determination. In one respect she feels that she has not sufficiently advanced, and, that is, the training of men to lead industrial movements along different lines as their pioneers, and to inspire capitalists and merchants with confidence and courage. In the opinion of this former Prime-Minister of Japan, the number of such men is yet sadly small as compared with the demand.

"It is not the absence of a protective tariff," he writes "nor the scarcity of capital, nor yet the high rate of interest as some hold, that we have to deplore. One or two of these supposed causes may have something to do in hindering Japanese industry from developing with even greater speed. Every encouragement should be given by the Government and the nation at large, to the

public and private institutions of learning, and to certain industrial corporations, so that they can furnish the country with a sufficient number of such men through study and practice, and in the course of time, they will become a most valuable instrumentality in developing the industry and resources of the nation without the aid of protection."

Sometime ago Japan used to employ a large number of foreign professors in her educational institutions, but their number has of late considerably diminished. But still their number is large. According to the *Japan Times*, a journal published in English at Tokyo, in the year 1899, there were altogether 52 foreign professors, of whom sixteen were Germans, twelve were English, six were Americans, six French, three Koreans, two Russians, two Italians, two Chinese, one Belgian, one Spaniard and one Swede.

"It is satisfactory to notice" writes this paper, "that strenuous efforts are being made by the department of education to afford means to the University Professors to keep up with the progress of science in the west by personal visits of more or less extended period to the leading seats of learning there as well as to provide supplies of professors by sending the young graduates to complete their studies abroad. The number of persons ordered to go abroad for these purposes during the year under consideration was 58, the great majority of whom proceeded to Germany, while those that returned from abroad after finishing their studies there numbered 15. The total number of the professors and graduates studying abroad at the expense of the Government and for the purposes mentioned above, was 100 at the end of March 1900, showing an increase of 42 over the number for the corresponding period of the preceding year."

It is not to Afghanistan that we should be inclined to look for precedents in shaping our course of action in the matter of industrial improvement. Still it is a progressive country, and under the vigilant and energetic policy of the remarkable ruler who has during the last eighteen years done so much to consolidate his kingdom and sow the seeds of civilisation in it, a marvellous measure of progress has been achieved in the application of modern methods to the industrial needs of the country.

We have referred to what has been done by the rulers of Japan, Afghanistan and to what leading thinkers of England, Germany and Canada have said, about the great question of Technical Education, in order that light may be thrown on what the rulers

of India should do in view to her eventual redemption from her miserable condition of growing poverty and to her reaching a fair measure of material prosperity. In no country in the world where great achievements have been made in industrial progress, did responsible rulers think of beginning at the bottom, of educating the labourer, improving the handicrafts, or reviving such artistic industries as are capable of producing a few articles of luxury consumed by a small class of wealthy people, while neglecting those great manufacturing industries which supply the daily wants of the whole nation and content to depend on foreign enterprise and foreign imports which drain the wealth of the country and tend to keep it in a state of industrial servitude. The great problem now confronting the statesmen of India is, as Lord Curzon observed, how to increase the non-agricultural wealth of the people. We have tried to show that this increase cannot be effected by the free employment of foreign capital which only enriches the foreign capitalists and perpetuates the helplessness of the people. And it is obvious that a few indigenous industries which will only supply articles of luxury to a handful of people cannot contribute materially to non-agricultural wealth. In his eloquent address to the students of Trivandram, Lord Curzon indicated the lines on which industrial education in this country should proceed.

In Travancore, "he said," there are minerals to be unearthed, there is abundant water supply, capable of being converted into different forms of energy and productiveness, there is infinite richness of plants, timber and trees, there are manifold varieties of animals, birds and insects, there are all sorts of experiments to be made in agriculture, there are numerous openings for public works, there is ample scope both for a student who prefers the laboratory, and the out-door explorer or engineer ..... You should proceed to discover independent channels by which each of you may render service to the State."

As in Travancore, so in other parts of India, there are rich natural stores concealed in the womb of the earth or slumbering on its surface, which are now simply wasting or turned into money by foreign capitalists to the serious injury of the

Indian people. To educate the people so as to enable them to turn these natural stores into national wealth is not only the duty of the State of Travancore and other native States, but also of the Government of India who are answerable for the contentment and prosperity of the millions in British territory as well as in native States. Professor Ramsay expressed a similar opinion while speaking in Bombay a short time ago. The great problem in India is, in his opinion, to adopt a system which will combine the dissemination of knowledge already known and the discovery of knowledge previously unknown. The best solution of this problem is to modify the present system of education so as to approach the ideal of Germany whose Universities supply straightway chemists to the chemical industries of that country.

"One of the most important problems for India," said Professor Ramsay, "was to establish in its midst industries by which they could make use of the enormous and bountiful supply of materials in the country. There were two ways of making money from such materials. For example they could take the iron ore, and export it to other countries. The second and more profitable plan would be to open iron industry in the country and give employment to thousands of Indians. He would press upon every man in India to seriously consider the question as to how the industrial progress of India has to be achieved."

This is the great problem before the Government of India. Such a conservative politician as Sir M. Bhownagree said in the House of Commons last year that

"the great cause which leads to the impoverishment of the resources of India and exposes her population to the ravages of scarcity and famine was the drain of the wealth of India by the enormous volume of the foreign manufactured articles imported into India every year."

To stop this ceaseless and enormous drain of wealth, which amounts to no less than 40 millions a year by stemming the tide of foreign importation and by substituting in the place of foreign articles those manufactured in the country with Indian capital, Indian knowledge and Indian agency, is not a problem to be solved by the establishment of a dozen small schools at a cost of a few thousand rupees, where a few Indian artisans may receive training. It is not the hand of the artisan that has to be

trained so much as the *mind* of the higher class of young men who will pioneer the way to the industrial upheaval of India. For almost every article of daily use the Indian people now depend on foreign manufactures. Not only are cotton fabrics imported, but among other manufactured goods imported from abroad are (1) apparel, including boots and shoes, (2) building materials, (3) cabinetware and furniture, (4) Candles, (5) clocks and watches, (6) earthenware and porcelain, (7) glass and glassware, (8) leather and leather goods, (9) matches, (10) paints and colours, (11) paper and pasteboard, (12) soap, (13) stationery, (14) toys, (15) umbrellas, and (16) ironware. Now, there is not a single article within this list which cannot be manufactured in India and of which the raw materials are not to be found in abundance in this country. Instead of these raw materials being manufactured here and the manufactured articles being sold in the markets of our country at comparatively cheap prices, they are exported to foreign countries where they are converted into finished articles to be imported back to this country and sold here for enormous profits. In fact, India supplies raw materials to other countries and is content to receive from them finished articles of use. It is this anomalous state of India's foreign trade that is proving so disastrous to her economic condition. The Indian people not only lose the wages and profits that can be obtained from the manufacture of raw materials, but have also to pay for the profits of the foreign capitalists and merchants, for the freight, insurance fees, and so forth. To remove this anomaly and to place India's trade on a natural basis, the basis, namely, that the large and unlimited market supplied by her teeming population should be mainly reserved for the products of her indigenous industries and that what may remain as surplus should be exported to foreign countries in exchange of what cannot be produced or manufactured here, to do this is the only means of averting the disaster that threatens to work

India's complete economic ruin in the near future.

We shall proceed now to consider some practical steps that should be taken to save India from this disaster.

1. The very first step that should be taken is the step that Japan under almost identical circumstances took to bring about an adjustment of her old economic system to suit her new political and social conditions. It is the establishment of a large number of scholarships to enable Indian youths to proceed to foreign countries and there receive the highest possible education and training. His Highness the Maharaja of Baroda said that not less than 500 Indian students should be thus sent abroad every year. If Japan had one hundred students in European countries and in America, five hundred is not too many for India. That this is the solution that commends itself to the Indian mind is apparent from private efforts being directed on the same line. The Maharaja of Baroda, consistently with his opinion, is maintaining a large number of students in foreign countries. The Government of Travancore has just announced the foundation of two scholarships for the same purpose. Mr. J. N. Tata—the enlightened and patriotic millionaire of Bombay whose name is becoming a household word throughout India—has for some time past done the same thing. Through the exertion of the late Mr. Ranade, the bequest of the late Sri Mangoldoss Nathoobai for educational charity was made available for scholarships of this kind. H. H. the Nizam has already sent some students for liberal education in England, and there is every reason to hope that that enlightened ruler would be pleased to depute some students for practical industrial training also. The Maharaja of Mysore has shown enlightened and practical sympathy with this plan. He had sent to Italy for practical training in architecture a student named Rohini Kant Nag, who, however, on his return after the completion of his study, died. Another student by name Shashi Bushan Hesh was also sent to Italy by this patriotic

Prince, and he has returned a master of the art of painting and has already won fame in European countries. It is stated that the Maharaja intends sending two more youths to Europe for the same purpose. An association has been recently founded in Bombay with the object of promoting Industrial education in India, and in its latest report we read the following significant passage.


"To refute an objection which a few people had raised sometime ago that no youths would, on account of religious and other difficulties, be forthcoming, it may be stated that 57 students have of their own accord, applied for our help and that 8 of them are graduates of Indian Universities in arts or sciences, that 5 are L. M. E's. of Bombay Technical Institute, that 24 are Practical Engineers, and that the remaining 20 are under-graduates. Applications from the students who have studied up to the Matriculation Examination are numerous and have not here been taken into account."..... "Besides, during the course of the three years past, about two dozen qualified students have gone to foreign countries for learning industries, either on their own account or supplemented by help from others."

It is no good saying that these students studying industries in foreign countries will find no suitable employment on their return. In the first place, the fact that so much is being done by private effort is a sufficient refutation. If there is any sufficient reason for the belief that such will be the result, all the spontaneous effort that we have referred to will not be made. In the second place, some of the students who have thus returned have found profitable and honourable employment. We have already mentioned the name of Mr. Hesh who is doing very well as a painter. Mr. Godbole, who was trained in pottery and chocolate manufacture in Belgium, has started a chocolate factory in Baroda. An enterprising Parsee gentleman Mr. Talati, who was with great difficulty trained in England, is now running a thriving leather factory in Bombay, which the Railways, and Lord Northcote and Lord Curzon have thought worthy of their patronage. Mr. Wagle will soon establish a glass factory in Bombay. We recently read in a Bengal newspaper of a Bengalee mining expert, Babu Sarat Chander Rudra, who has travelled all over the world, and has visited the mines of

distant Korea. His services have been utilised by a European Mining Company in Bengal. Mr. H. P. Chatterjee of Umballa, who studied the art of pencil-making in Japan, has, on his return, issued a prospectus inviting shares for the modest capital of 6,000 rupees to establish a pencil factory. There must be other instances of which we are not aware.

2. The next step is to establish large industrial schools for the training of Indians to manage important industries. Our mines are all worked now by English capitalists, who reap all the profits. The Kolar Gold Mines have yielded during the last 12 years upwards of 18 crores of rupees which have all gone into the pockets of Englishmen, with the exception of the 5 p. c. royalty paid to the Mysore Government and the wages paid to some 40,000 Indian coolies employed there. The same may be said to be the case, more or less, in regard to iron and coal mining. A English writer in the *Madras Mail* recently lamented

"That India should be totally unable to provide the capital for her own development, and that in consequence all the profits arising from this industry should leave the country is bad enough. But it is worse still when we reflect that there is no opening on the mines for native technical skill, and that in fact none exists. The cry for technical training is heard all over the land, but in a case where something might be done, where a great industry exists, which possibly might become greater, no effort is made by those in power to arrange matters so that the people may derive some permanent benefit from the enterprise in their midst."

It is some satisfaction that the State of Mysore  has already made a move in this direction. It has established, in connection with this industry, a metallurgical Laboratory, which is equipped with a small experimental plant for the treatment of gold ores, including stamps and apparatus for the sizing and treatment of tailings. It has also established an institute which might easily be converted, it is said, into a first class technical school of a special character. In the long run, Indians trained in such an Institute will take the place of European Engineers and reduce materially the cost of working. But, over and above this small begin-

ning, the Mysore State is in a peculiarly favourable position to give a good start to higher industrial training to the people of this country. To quote again our contemporary :—

"The Cauvery Falls Electric Power Transmission scheme is one which reflects the greatest possible credit on the energy and wisdom of the Mysore State, and it cannot be doubted that almost from the outset it will yield a large surplus revenue. Part of this might well be devoted to the establishment of a school of mines and mineralogy which, by arrangement with the managers of the Kolar mines, could be made an institution equal to any in the world for the opportunities which it could offer for both theoretical and practical training in all that belongs to mines and minerals. The Mysore State has been exceedingly fortunate in possessing the Kolar Field, and the possibilities in other parts of its territory are equally great. But, notwithstanding the energy and ability displayed in dealing with the mining developments, the State officials have neglected entirely to train their own people to participate in the work of the future, and still rely entirely on imported foreign brains and experience to carry out the exploitation of the wealth so bountifully stored in the rocks beneath the soil."

We hope that these words of friendly advice have reached the ears of the statesmen now presiding over the destiny of that State. The master mind that directed the management of its affairs for a period of 18 years, is now enjoying a well earned rest; but his successor, Mr. P. Krishna Murthi, C. I. E., is animated by enlightened and patriotic intentions as any of his predecessors was, and we feel confident that such a unique opportunity for advancing the best interests of the State and enhancing the reputation of Mysore will not be allowed to pass away. But we are aware that many a noble idea of Indian statesmen has been smothered by the chill attitude of British Residents. If however the British Resident of Mysore, or the Government of India, will give to Mr. Krishna Murthi the stimulus of his or their encouragement, we may expect substantial results from the endeavours of the Mysore Government. Such a technical institute, as indicated above, though for accidental reasons established in the Province of Mysore, will yet be one of national and imperial importance, and the Government of India may well take upon themselves the burden of its maintenance and responsibility of its management. Similar institutions should be established

in connection with other mining industries in other parts of India.

3. There is another industry in regard to which Government might appoint experts to consider a practical scheme for its revival, and that is the textile industry which for a long time in a decadent state, has within the past few years been sinking with more rapidity than ever. There is no other town in Southern India where weaving industry was more flourishing than Madura, but along with that community in every part of India, the weavers of Madura have had an exceedingly bad time of it during the past 25 years. In a letter which the manager of the Weavers' Association of that place wrote to Sir Edward Buck, they gave the following plaintive account of their present state :—

"It was in the reign of the famous Thirumalai Naik that weaving and dyeing became important and thriving industries here (in Madura); and in those days, the woven and dyed cloths of this city were the wonders of the foreign nations. Lace-making was also carried on here in a primitive style by a handful of Mahomedan residents till about 1879 when gold threads from France came into use and have since driven away altogether the indigenous lace-making. The recent introduction of aniline and alizarine colours from Germany instead of the well-known indigenous madder roots and barks has knocked on the head the indigenous dyeing industry, while the importation of cloths made of yarns of fine counts from England has given a death-blow to the indigenous industry of weaving. It was in the beginning of 1883 that cloths manufactured from Indian and foreign mills came first to be dyed with German alizarine and after this, hand-loom weaving has diminished to a large extent, the dyeing of yarns with alizarine or aniline stuffs taking its place and now forming the staple industry of our city. This will incidentally account in a great measure for the speedy decay of the Glasgow-Turkey-red trade. After the Paris exhibition of last year gilt-thread making, which was a speciality in the French towns of Marseilles, Lyons and Paris, has found much favour with French ladies so that the French manufacturers are unable to meet the Indian demand in spite of the heavy prices paid for them here."

The leading members of this decadent but intelligent community have been recently bestowing much anxious thought on its future, and have come to the conclusion that their requirements are at present: (1) a textile school; (2) a technical dye-house for natural colours; (3) an alizarine factory, preparing alizarine from madder roots; (4) a gilt-thread making factory and (5) weaving of

hamel and woollen cloths from handlooms driven by electric power, as has been recently done in Oldham. In the opinion of experts, there are many reasons for believing that hand-weaving, instead of diminishing, will increase in India, and such schools as the Sourashtras of Madura propose will do more than anything else to improve the work and enhance the earnings of the handloom weaver. In hundreds of places in India, the weaving industry was once in a flourishing state as in Madura, and in all these places similar schools should be established by the State.

We have no space for pursuing this inquiry further. In a score of other industries the State can most advantageously take the initiative and train the people so that in course of time they may be able to take part in the rearing of indigenous industries and produce non-agricultural wealth affording the much-needed relief to the congested industry of agriculture. It is in this manner that the people can be redeemed from their present condition of complete industrial subjection, and the calamity of a dreadful collapse be averted, and not by offering costly inducements, at the expense of the people, to foreign capital to flow into the country in abundance. This latter will only end in the perpetuation of India's helpless servitude. There is only one consideration that we can surmise as accounting for the Government of India's apparent reluctance to move in the matter with the promptitude and enthusiasm that the grave issues involved call for, and that is, an unrighteous and unworthy solicitude for the interests of British capitalists and labourers. But according to the repeated declarations and assurances of our rulers made in the most solemn manner possible, the interest of India takes precedence over the interest of the ruling country when there is a conflict between both, and we may be confident that the policy of making promises to the ear and breaking them to the heart will be spurned with disdain as unworthy of British honor and of British reputation.

G. SUBRAMANIA IYER.

### The World of Books.

CRITICAL STUDIES. by Ouida. (London—T. Fisher Unwin).

This volume is a loud protest against modern civilisation. Ouida pours forth her fierce denunciations on all that is unmanly, inhuman and unchristian at the present day. Nothing escapes her trenchant pen. With immense fervour quite unique of her, she applies her whip to everything and her lashes fall heavily on the objectionable aspects of modern politics, modern manners, art, literature, and architecture. The three most telling essays in this book are those on "Joseph Chamberlain," "The Ugliness of Modern Life" and "The Quality of Mercy." In all these, we see the exhibition of Ouida's temperament, at once vehement, impulsive and highly passionate. You may not agree with her exaggerations but there is no doubt that much of her condemnation of modern civilisation is not undeserved. The essay on Chamberlain is an unstinted abuse of the politician who is now the idol of a large majority of the British nation. As the world watches with anxiety the political ascendancy of this "merchant politician" and a section of the British public view with alarm the prospect of "Birmingham Joe" becoming the Prime Minister of England ere long, it may not be inappropriate to know what Ouida thinks of him:—

His physiognomy thoroughly indicates his character, not striking nor distinguished, but full of energy, intelligence, obstinacy; the physiognomy, in short, of a merchant, not of a statesman, of a shrewd man, not an intellectual one. The inevitable monocle in his eyes serves to conceal its expression, and the short, turned-up nose gives a common cast to features otherwise fine and regular. In the last few years he has changed more in appearance than his age would justify, and he is tortured, it is said, both with gout and neuralgia. Surely, one of these afflictions might have sufficed; Chamberlain dresses well—"too well," one of my friends, an ex-viceroy, whispered in my ear that evening—and is never seen without an orchid in his button-hole, a flower culled from those famous hothouses which the Conservatives threatened to burn down only a short time ago, when he was so hated by them as to be considered little better than anti-Christ. It has been said, and probably with truth, that Chamberlain left the Liberal party on account of his jealousy of Gladstone, and of his irritation at the mastery which the latter never failed to exercise over his colleagues. Another cause of his defection was the presence of Lord Rosebery, just then at the beginning of his promising career in the Liberal ranks, also of Vernon Harcourt, and among the Home Rulers, of that great genius, Charles Stewart Parnell, in whom Chamberlain must undoubtedly have recognized an invincible superior. If these were his real reasons, he ought surely to feel satisfied now, since no one in Lord Salisbury's cabinet dare venture to contradict or thwart the powerful Colonial Minister, who is, in fact, if not *de jure*, the actual head of the Government. Many a distinguished man has been minister to the colonies, notably Lord Carnarvon and the first Lord Lytton, but no one has ever made

of this subordinate office the throne of *Suprema Lex* that it is made by Joseph Chamberlain. And with whom lies the fault? Let us endeavour to settle this question, since the problem is an interesting one; and it is a phenomenon of even greater interest to see Robert Cecil, Marquis of Salisbury, fallen under the dominion of the merchant of Birmingham. In the Conservative party, at the moment of Chamberlain's entrance into it (as indeed later, and even up to to-day,) there was no one equal in force of character and depth of intelligence to himself. The only person who might have ventured to command him was Lord Salisbury but as the facts have since clearly shown, Chamberlain was perfectly sure of his ability to overrule the illustrious head of the Tories as easily as he overrules and subordinates so many lesser personages. A friend of mine, in speaking to me of Lord Salisbury, once said: "He is a cannon of large calibre, but he either misses fire or shoots wide of the mark." This is probably Chamberlain's opinion also, and it makes him determined to manage this "cannon of large calibre" himself. And the facts show that he has judged correctly, when one considers his triumphal success. Let posterity condemn him if it will; I believe him to be a man to whom it matters but little what may be said of him after his death. He is strong and callous, with a large dash of cynicism in his composition, and to a politician of this type the judgment of history is of no moment, and fame but a carnival masquerade, to the sound of a blatant trumpet. The great Napoleon after his Egyptian campaign said: "If I should die to-morrow, I should be given only half a page in a universal dictionary." To Chamberlain, I believe it would be a matter of indifference whether he got half a page or a whole one. What he cares for is to lead others. Had he appeared fifty years earlier, would he have succeeded in this? I do not believe it. For, in the first fifty years of the nineteenth century the world sought after and admired qualities vastly different from his own; while nowadays it is precisely such talents as his which succeed best; by which remark I certainly do not mean to pay a compliment either to him or to the times. In a nobler or more upright epoch than the present, a great party like the one which calls itself the Conservative would have rejected with scorn the Radical turned Tory. Instead, it has received him with open arms, and paid assiduous court to him; indeed, the victory of the Tories at the elections of 1895 would not have been possible without his permission—had he not felt sure, that is, of being included in the ministry.

Chamberlain has been equally fortunate in the opportunities with which fate has presented him, and in his capacity to make use of them; in the mediocrity of the men acting with him, as well as of those opposed to him, and in his ability to master the former and intimidate the latter. Fortunate has he also been in respect to the present indifference of the English people on the subject of religion, for, in the past, the whole nation would have regarded with horror the entrance of a Unitarian into an office of the government. But his most marvelous piece of good fortune has been the appearance of Irish autonomy on the scene, precisely at the moment when he conceived the desire to enter the Conservative camp."

Ouida asserts that Chamberlain could never have risen to power unless it be that the political morality of England has deteriorated. The pernicious "imperialism fever" generated by Disraeli has so contaminated English political life that a man of

the stamp of Chamberlain has become the idol of England.

He (Chamberlain) does not possess the talent, unrivalled for a politician, of taking refuge in exquisite and airy phrases which mean nothing. He never speaks boldly and openly; his replies are either equivocal or directly brutal. He is easily angered, and one can see by his face that he does not possess the self-control which is one of nature's most precious gifts to be a born gentleman. But his uncouth manners, his cynicism, his business finesse have completely captivated both English society and the English Government, and we witness the strange spectacle of cultivated men like Mr. Arthur Balfour, for instance, turned into mere puppets in his hands, voluntarily relinquishing in favour of his schemes their own political belief, as well as their personal integrity. He has carried with him to the Treasury bench the manners and mode of speech that formerly served his purpose in administering the municipal government of Birmingham. When he is sincere he is vulgar, and his comparison of President Kruger to a sponge that needed *squeezing* is a fair sample of his eloquence. I can never believe that the House of Commons at Westminster would have supported him in the days of Palmerston or Melbourne—those days when orators quoted Greek and Latin in their speeches, certain of being understood by at least the greater part of their audience.

No seed can grow unless it fall on the ground that is fitted to receive it and the Great Britain which endures and, indeed, frequently applauds Chamberlain is no longer the Great Britain of Canning, of Wellington, nor of the first years of Gladstone, for Disraeli's doctrines have permeated the life of England throughout its highest spheres as a pernicious fever penetrates into, and predominates over, a district. This is Ouida's judgment of the present day political life of England.

From a condemnation of the politics of the time, we pass on to her criticism of its manners and morals and to duly appreciate this, we have to read together the papers on "The Ugliness of Modern Life," "The Quality of Mercy," "Written Literary Laws" and "Alma Vneiesia." "The beauty of the earth is dying, dying like a creature with a cancer in its breast." This is the burden of Ouida's melancholy song.

"The loss of beauty from the world is generally regarded as the purely sentimental grievance of imaginative persons; but it is not so; it is a loss which must impress its variety fatally on the human mind and character. It tends more than any other loss, to produce that apathy, despondency and cynical indifference which are so largely characteristic of the modern temper."

The people are taught to think that all animal life may be tortured and slaughtered at pleasure; that physical ills are to be feared beyond all others, and escaped at all vicarious cost; that profit is the only question of importance in commerce; that antiquity, loveliness, and grace are like wild flowers, mere weeds to be torn up by a steam harrow. This is not the temper which makes noble characters, or generous and sensitive minds. It is the temper which accumulates wealth, and which flies readily to war to defend that wealth, but which is absolutely barren of all impersonal sympathy, of all beautiful creation.

Ouida deplores the absence of true art in the sculpture and painting of modern times. She regrets that even among the most cultured classes few have really any sensibility to beauty.

"Not one in a thousand pauses in the hurried excitements of social life to note beauty in nature; to art, there is accorded a passing attention because it is considered *chic* to do so; but all true sense of art must be lacking in a generation whose women wear the spoils of tropical birds, slain for them, on their heads and skirts, and whose men find their principal joy for nearly all the year in the slaughter of tame creatures, and bespatter with blood the white hellebore of their winter woods."

We have no space to quote at length Ouida's views on several other features of modern civilisation. She condemns among other things, the anonymity of the press, cheap stuff for clothing, x shilling novels, motor-cars, bicycles, sleeping cars, factories of all kinds, the Catholic Church, the Anglo-American alliance, Italian blasphemy and the Italian monarchy, militarism, William of Germany.

The essay on "Alma Venesia" is full of pathos. Here is Ouida's cry against the "atrocities" of the municipal councillors of the city of Venice, otherwise known as the "White Swan of Cities."

"Old wells, old fountains, old shrines, beautiful fragments of sculpture and fresco, solemn convent walls, raceful church, spires and monastic belfries, parapets, robes, doorways, spiral staircases, winding up to hand-organised iron balconies, lamps of metal-work, fine as lace work, all these in innumerable numbers have been effaced, pulled down, built over or sold; and above all, there have been destroyed those lovely quiet green places, called each *il Campo* or *il Campiello* (the field or the little field), where, of old, the Venetians fed their sheep, stretches of grass enclosed by old houses, old convents, old towers, old quays, old bridges, with always a sculptured well in the centre of each and the splash of oars near at hand."

These will suffice to give the reader an idea of what Ouida thinks to be the obnoxious features of modern civilisation. As you read, you feel that her views are sensible and correct in many respects but you cannot but pity that she should have couched them in language of extraordinary violence and vituperation. Notwithstanding this great defect, the impartial reader must feel satisfied that in her "Critical Studies," Ouida has rightly laid her finger on the darker aspects of the much praised Western civilization.

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THE WRONGS OF INDIAN WOMANHOOD,  
by Mrs. Marcus B. Fuller, (Oliphant Anderson  
and Ferrier. Price 5/)

Mrs. Fuller would appear to be an exceedingly benevolent lady and we are afraid that her excessive benevolence has considerably incapacitated her from giving a true description of the wrongs of Indian womanhood. It is a great pity that

western critics of the social position of women in India lose sight of the essential fact that the eastern and western ideals of religion and sociology are entirely different. To begin to criticise, therefore, Hindu institutions from a western standpoint would be pursuing a wrong method. We do not for a moment contend that the position of Indian women is perfect. On the other hand, it is far from being so. We deplore our social evils as much as anybody else, but we shall be making a considerable sacrifice of truth if we pass unchallenged Mrs. Fuller's views of Indian womanhood.

She looks at everything from the Christian standpoint. She has got Pandita Ramabhai to write an introduction for her book, and this well-known Indian lady expresses the hope that the "book will be the means of turning thousands of mind to obey the Master's call and take the real remedy, the Gospel of Christ, to millions of India's women to heal the deep wounds of their hearts." This is the prayer of the Pandita and her colleague, the lady philanthropist. Indian women have at present none "of the deep wounds" referred to, but we have no doubt that if they come to know that Mrs. Fuller and Ramabhai are praying for their becoming Christian, it will cause them the utmost pang. We are sorry that Mrs. Fuller has considerably exaggerated the real state of things and this is due, we believe, to her Christian leanings. Her information has been gathered from Christian converts and she herself says in the preface:—"I am especially indebted to my friends, Professor N. G. Velinker who has been the most generous in this assistance, and Ramabhai whose counsel and sympathy have been of great value." If Mrs. Fuller had been able to study the position of Indian women without the help of Hindu converts to Christianity she would have been in a better position to put in more truth in her book than she has been able to do. The wrongs of Indian womanhood are many, but we venture to suggest their greatest wrong is the mis-representation and prejudice which they undergo under the hands of some good-natured European ladies and gentlemen.

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STREET DUST AND OTHER STORIES, by  
Ouida (George Bell & Sons)

The five stories in this small volume by Ouida are told in a style, the charm of which lies in its simplicity. The scenes are laid amidst fields and farms, rural sites, orchards and vine yards and sometimes in streets of cities like Rome, and the characters are interesting specimens. In the first of them styled "Street Dust," the story of two orphan sisters, 10 and 12 years old who had just lost their mother—she dying of over toil and little food—is



most touchingly told—how hunger gnawed them like a hundred wolves, how they tried to pursue their mother's calling—that of gathering flowers in the fields off the city of Rome and selling them in the city—how on entering the streets they did not know where to offer the flowers, and when they did offer them at a flower shop they were pushed down a flight of steps and how a lady in a carriage by took pity and gave them a franc piece, how Policemen arrested them immediately, charging them with the offence of begging and selling flowers without license and seized the coin for themselves and pushed their helpless bodies and kicked them into a by-street and threw them in clothes drenched by rain into the lock-up with old culprits to starve there all night. The Police were insolent to those who tried to rescue the poor lasses but the Magistrate discharged them with a warning. The lasses, unable to find their way out of the city, got into a deserted street to rest in a church where they both died of starvation—both were thrown into the common ditch in which the poor and nameless lie. The author exclaims at the end "what were they, more than dust of the street blown about a little while by the wind and then swept away and forgotten?" The other stories are equally interesting. In "the Fig tree" a strong rural superstition is illustrated which would have the "Fig tree" doomed to death and cut down for the offence of murder because forsooth a weak branch thereof on which a stout man had ascended to gather fruits gave way and the man fell and died.

We are sure the stories will be found interesting by all.

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DRISCOLL, KING OF SCOUTS, by A. G. Hales, War Correspondent, "Daily News". (T. Fisher Unwin, London. Price 2/6.)

Mr. Hales' book is singularly opportune. Though somewhat exaggerated and over-highly coloured in parts, his story is of breathless interest, and is certain to command a wide circle of readers. And this probably is all he desires. For the interest of the book is by no means confined to the pretty little romance of the dashing Captain of Scouts and the Venetian-faced Boer damsel, to whom he is at last joined in the "sweet-lipped peace" of death. This is merely the author's skilfully devised ruse to lure the reader on, firstly to a perusal of the shortcomings of the War Office, and secondly to an unwilling admiration for the brave nation who "unable to stay the onward rush" of the invading armies of Britain, are "ready and willing to die for the land they cannot save."

Mr. Hales' description of the attitude of the peoples of the Republics is very different to much

that we read in the War papers. There, we are told that the soldiers have to be whipped into battle, that De Wet is a cruel and merciless tyrant, and that everyone is longing for peace, to which Botha and De Wet are the only obstacles. According to Mr. Hales who, as a War Correspondent has been through the campaign, and has had at least as good an opportunity of forming an opinion as the warcribes who dictate articles from the cosy security of their offices in Fleet Street, the whole people are united in their determination to "fight to the bitter end". Simple farmers meet death bravely and calmly, "gladly giving their lives, all that they have to give," and their sons, often mere lads, snatch up the rifles they let fall, young girls wait bravely for the lovers who too often never return, and "would sooner wrap their grave-clothes round them with their shapely slender hands, than see them basking in peace among the renegade Dutch, who have gone back on their breeding for the sake of peace and prosperity"; and when the burghers, halt for refreshment and remounts at friendly farms, even the children watch them admiringly, regarding them as "paladins, the embodiment of all that is good and daring in the world", and vowing that "in the days to come, when they reach man's estate they will once more raise the flag their idols fought for". "Why, oh, why," we almost find ourselves exclaiming with Mr. Hales's heroine "If you British really want peace, do you not rest content with your victory? Why not claim an indemnity? We would work our fingers to the bone to pay it; we would be content with a life of poverty, of self-denial. All we ask for is our national liberty". We cannot yet pronounce whether Mr. Hales' verdict is correct that "if there had been no ambitious statesmen upon either side, but only plain, common-sense work a day folk such a war would never have been dreamed of; but when we remember England's glorious past and how she has ever been in the forefront of the fray in defending threatened nationalities, we can not refrain from a feeling of regret that the force of circumstances should have compelled her to play a part so diametrically opposed to all her noblest traditions.

The real hero of *Driscoll* is Christian De Wet, of whom we may take it the following is a fairly accurate portrait:—

"He himself, as he stood there waiting the coming of his courier, made an impressive picture, taller than most men, rugged as one of his own African hills, strong with the strength that comes of long years of hard work in the open air, gaunt as a grey wolf in winter, careless of dress and of personal appearance, hair and beard untrimmed

and iron-grey, hands large, long and brown, face fiercely magnetic—the face of a man built by the Eternal for great deeds. He looked what he was—"a man's son".

This is the man to whom is too often opposed an officer of the Colonel Glasseye model, whose brains have been "simply crushed out of him" by the War Office, "the very embodiment of all that is unwieldy and out of date". Mr. Hales' criticisms are none too drastic, and it is devoutly to be hoped that his scepticism as to the proposed reforms is unfounded. Otherwise when the country finds herself face to face with a combination of first class Powers, she will indeed "find out what this cursed system has done for her." But forewarned is fore-armed, and we prefer to believe that our bitter lesson in South Africa will have the result of making our army officers equal to our naval commanders. How little that will leave to desire, Mr. Hales' delightfully-drawn Scotch correspondent admirably describes:—

"Tommy is as good a man as Jack any day, but Jack has the advantage of being led by men who have devoted their lives to their profession. Jack's officers can't play a great game of tennis. They don't often figure largely as ornaments on the lawns when the ladies get up a croquet tournament. They are not too good at billiards or in a ball-room, but by St. Peter how they can fight! Why, when a kid in a middy's uniform in action is a sight to make a man's blood run warm, and the military allowances would be just as good if they were made to allow their profession as men should follow it."

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#### THE ENDING OF MY DAY (*T. Fisher Unwin.*)

Rita always writes charmingly and "The Ending of My Day" adds to the reputation of a prolific writer of fiction who reminds one of Ouida in her descriptive power. It is the self-revelation, in a diary of the life and experiences of Miss Belle Follitt, afterwards Mrs. Jack Trefusis, and subsequently after being divorced from her husband—Lady Dalrymple.

Her father dying, for in infancy Belle became motherless, she goes out as a companion in an Irish family. The tragic death of her dearest friend and her lonely position in an amorous widower's house drives her to take refuge with an old lady friend of her dead father. She there becomes acquainted with a fast cynical and fascinating woman of the world, Lady St. Omer, with whom she stays as a companion and friend. Lady St. Omer's friends are as fast and fashionable as herself and after a time the selfish, sensuous, aimless life falls upon Belle. In this state of mind

she meets her early playmate, Jack Trefusis who gave up a good position in the army for the excitement, applause and precarious credit of a public singer's, Jack being possessed of that rarest of gifts, a good tenor voice. Marriage—a true love marriage—follows and then came business engagements, misunderstandings, recrimination, and then a long separation—Jack Trefusis going to America on an engagement. More misunderstandings due to an anonymous letter to Belle's earning her own living by becoming a society paragraph writer, the borrowing of money from an old and persistent admirer Sir Denis Dalrymple, a misunderstood scene in which Belle and Sir Denis are the principal figures lead to a divorce—Belle being divorced by her husband. She then marries Sir Denis but turns, with longing vain, to her old love. How the matter ends I leave it to the readers of the novel to discover. Besides Lady St. Omer who may be seen daily in "Vanity Fair," Johnny Firebrace is an emancipated lady who plays an important part as Greek philosopher and friend to Belle and gives dissertations on theosophy and other occult subjects. She is distinctly good, and her character is drawn with vigour and humour. In fact Lady St. Omer and Johnny Firebrace are the very antithesis of one another; the former having no enthusiasm and believing in nothing, and the latter denouncing all sham, priestly and conventional, and preaching the gospel of pure living, work and freedom. To one "Happiness is a vulgar attribute and is only possible to natures where the senses dominate the intellect" To the other "Happiness is the result of an invariable law which has worked through many channels (Karma) to one end. It comes from trial, search and acceptance of the Divine law." "The Ending of My Day" is an admirable wholesome and interesting record "of that curious mystery of emotions, feelings, desires, despairs which birth entails, and death alone can destroy—a life we would cordially recommend the book to all readers of fiction."

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#### BROUGHT TO BAY (*George Bell & Sons.*)

This is a novel of adventure the scenes of which are laid in Europe and America. The lust for wealth is the determining factor and two half brothers Julian Hawtrey and Raoul Hawtrey, strangers from their birth and joint-inheritors of a legacy, meet late in life and become co-workers in exploiting a rich mine in America. The story is interesting in so far as it describes in vivid colours the life of the adventurer in Europe and America amidst absolutely different surroundings. It is, however, a sordid story of illicit love-making, the hunger

for the root of all evil, deceit, and treachery, which gives the reader a very poor opinion of human kind. The two brothers, Julian and Raoul one dismisses with the expression *arcades ambo* for both are untruthful and by no means gentlemen though of good parentage and bringing up. In the end one brother shoots the other, that is, murders him in cold blood, and after getting the lion's share of the wealth dies the death of a suicide and coward when confronted with his dastardly crime by the only honest character in the book "Texas Dave," a rough frontier's man of infinite commonsense and readiness of resource. The suicide, rather than let his wife whom he loves with an absorbing passion, see him in his degradation of discovered villainy takes his life to save her that humiliation. The situation is summed up in Texas Dave's words thus: "God bless her" said Texas Dave "she is a true-hearted woman, and she stands there shielding the memory of the man who died for her sake! Rather than see shame rest upon her, he faced the awful truth alone! After all, a man—a game man and one who only struck his luck in life too late—my pardner! But the devil in his heart never made him forget that angel by his side!" Mr. Savage, the author, wrote a much better story in "My Official Wife," and one far superior to the novel here noticed.

#### THE ORIGIN OF THE FRIEZE.

The *Art Journal* for May contains an illustrated article by Mr. Herbert A. Bone, on "The Origin of the Frieze." The author introduces his subject as follows:—

The Frieze has of late become so familiar and accepted a form of decoration both in and out of doors, that an examination of its origin, a study of its principles, and a recognition of its value and right function, may be helpful as well as interesting, not only to the designer but also the public. The term, as we use it, describes any continuous horizontal band of ornament applied to a wall, generally, but not always, at some height above the eye; the word having been diverted, for convenience sake, to this general meaning, from the exclusive sense in which it formerly denoted only that course lying between the architrave and cornice of a Greek or Roman building, usually, though not necessarily, bearing either a continuous or repeated decoration. To this member the name of Fregio, which primarily means a border or trimming, was applied by the Italians, when ancient buildings began to interest them, and names were needed to distinguish parts. The disuse of the precise classical formula by modern architects has, however, set free this useful and comprehensive term for a more general definition, decided by the character rather than the position of the decoration.

Another article not less interesting is by Mr. Lewis F. Day on "Modern Stencilling."

#### Books Received.

##### THE UNIVERSITY TUTORIAL PRESS, LONDON—

Livy—Book xii, Text and Notes, Edited by John Thompson, M.A.; F. G. Plaistowe, M.A.

##### H. VIRTUE & Co., LTD, LONDON:—

The Life and Works of Sir John Tenniel by Cosmo Monkhouse with nearly fifty illustrations ... ..

##### THACKER SPINK & Co, CALCUTTA:—

The Great Anarchy, by H. G. Keene, ... Rs. 4

##### THEOSOPHICAL PUBLISHING SOCIETY, BENARES:—

The Science of the Emotions, by Bhagvan Das, M.A. ... ..

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#### TALES OF TENNALIRAMA,

##### THE FAMOUS COURT JESTER OF SOUTHERN INDIA

By Pandit S. M. Natesa Sastri, B.A.

(Member of the London Folklore Society.)

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## Topics from Periodicals.

### THE GROWTH OF THE BRITISH EMPIRE.

*The Canadian Magazine* for March is a memorial number and contains as one of its most important contributions an article by the Hon. G. W. Ross, (Premier of Canada) dealing with the above subject. To do full justice to the topic would require more space than we could conveniently allot to it. As far as facts expressed in statistics are concerned, the article is very good. The power of Britain for colonisation and expansion became very apparent about the close of the last century. At the beginning of that period, Britain's Colonial Empire was sixteen times larger than the area of the United Kingdom. The peace of 1815 left her with most of the West Indies, Cape Colony, a great part of what is now British India and her British possessions in North America. The greater part of South Africa, namely, Natal, Bechuanaland, Basutoland, Zululand, the great portion of the Gold Coast, the basin of the Niger and more than half of British India with sundry possessions in China and certain rights in Egypt and Soudan were annexed during the reign of Victoria. In other words, what hundred years ago was a colonial empire sixteen times greater than the United Kingdom has now grown to be ninety-six times more so. Looking from another standpoint, an empire of two million square miles has grown to be an empire of twelve million square miles. The growth of Britain's population has kept pace with territorial expansion. The relative strength of the British Empire and her four rivals for the sovereignty of the world, namely, Russia, United States, France and Germany may be seen from the following table :—

	Area,	
	Sq. Miles.	Population.
British Empire	12,000,000	390,000,000
Russian Empire	8,644,000	130,000,000
United States	3,650,000	87,000,000
France and colonies	3,940,000	96,000,000
German Empire and colonies...	1,235,000	70,000,000

This is not all. British energy is many-sided and no less puissant in the arts of peace than in the arts of war :—

A century ago, the value of all the cotton, linen and woollen goods produced by Britain was £ 22,000,000; the average value now is £ 170,000,000. A century ago the total consumption of raw cotton, wool and flax in the factories of Great Britain was 200,000,000 lbs.; in 1899, the consumption was 2,617,000,000 lbs. In these industries alone there are £ 200,000,000 sterling invested in capital, and at least 5,000,000 people employed as operators. Another illustration : The steam power employed by Great Britain in her industries in 1835, just before Her Majesty ascended the throne, amounted to 41,000 horse-power; in 1890, it amounted to 10,000,000 horse-power.

Taking one horse-power as equal to the work of sixteen men, Britain has added for industrial purposes 160,000,000 men to her natural working capacity. Equally remarkable has been the expansion of Britain's foreign trade :—

At the close of the Napoleonic wars, the total foreign trade of England amounted to £70,000,000 sterling (or about equal to the trade of the Dominion of Canada last year) and at that figure many of her statesmen thought that British trade was dangerously inflated; in 1900, her trade amounted to £815,000,000. Mulhall gives the following as the trade per head of the principal countries of the world :—

Great Britain	... 390 English shillings.
Germany	... 156 "
United States	... 100 "
France	... 163 "
Russia	... 27 "

Britain's supremacy at sea is equally significant with her commercial and territorial supremacy :—

At the close of the seventeenth century the shipping of the world was estimated at 2,000,000 tons, of which the

Dutch	.. owned 900,000
British	... " 500,000
French	... " 120,000
Scandinavians	... " 150,000
Germans	... " 100,000
Italians and all others	... " 120,000

At the close of the eighteenth century, the world's shipping was estimated at 4,026,000, of which Britain owned 1,856,000, the United States 170,000, France 250,000.

At the close of the nineteenth century, the shipping of the world represented 25,000,000 tons of which

Britain and her colonies.	.. owned 14,000,000
French	... " 1,242,000
Scandinavians	... " 2,300,000
Germans	... " 2,500,000
Italians	... " 876,000
United States	... " 4,800,000

None the less gratifying is the decrease of pauperism with the increase of population and consequent fall in crime :—

In 1850, the pauper population of the United Kingdom was in the ratio of 5·11 to every 100 persons, whereas in 1899 the ratio was 2·65 to every 100 persons or a decrease of nearly one-half. With the decrease of pauperism came also a decrease of committals to prisons, the decrease within the last fifty years being from 40,000 in 1850 to 19,870 in 1890.

Mr. Ross adds that the most significant fact indicating the growth of British power is the sentiment of Imperial Unity. The growth of imperialism instead of being an antithesis of democracy, as is held by some, is the greatest security which could be given to the democratic character of British institutions.

Britain, to retain her colonies, must be democratic, because her colonies, from the very nature of their circumstances are necessarily democratic themselves; and I have no doubt that the century on which we have entered will prove that the necessity of governing colonies as democracies, unhampered by the traditions of the old land, will react upon the government of the United Kingdom itself, and broaden its sympathies more and more towards the great masses of the people on whose acquiescence the security of her empire depends.

—o—

#### SOCIETY—PAST AND PRESENT.

An interesting article by CONSTANCE COUNTESS DE LA WARR on the above subject in the May number of the *Humanitarian* contains a good sketch of the changes that have come over English Society during the last century. In the days of Lady Jersey and Lady Palmerston, society was so small that those who see the immensity of it nowadays cannot form a fair idea of it. The pleasures of society were then far more simple than they are now :—

Balls and entertainments were far fewer than in the present day, and there were only certain great houses that had the right to entertain in London. During the day, except in their lumbering coaches, or else walking in the Park, with their footmen behind, ladies were never seen; they devoted most of their days to fine tapestry work and painting in albums. They were not so highly educated as now, and therefore their ideas did not soar high. The simple, every-day life suited them, and they had no desire to get away from it. Great deference and respect were shown them by men. Smoking in a lady's presence would not have been tolerated, but on the other hand, hard drinking among many men was not looked upon with the same reproach as it is now; indeed a young man was not thought worth much unless he could swallow a certain number of bottles of wine. Hostesses then knew personally all who entered their houses, and no persons were received without enquiries being made about them, and their antecedents being thoroughly gone into. Needless to say, the extreme

etiquette of the day led to too much mannerism and affectation, and to high-flown romantic ways of talking, yet surely the outward form of good manners and respect on the part of men to ladies was better than the indifference and want of courtesy so prevalent now, which is often really not intended, but put on as being in keeping with the age. Men and women then, of course, met quite on a different footing. Women did not take up men's employments and amusements. Smoking and shooting for ladies were unknown; they had not the freedom bicycling gives; no lady travelled or even walked alone, so they were dependent on man's courtesy and help in every phase of their life, therefore it was the aim of men to vie with each other in doing this on all occasions. Home then was the centre round which everything turned, and its privacy was not invaded then, as it is now, by newspapers, which pry into details of every one's life. Dinners outside people's own homes could not have taken place, as restaurants were unknown, and society, as then constituted, would never have dreamt of making use of them if they had been.

It will be seen from the above that English society is very different nowadays from what it was. Then it was much more select; now money has much to do with its enormous growth, for money paves the way to its gates. The great contrast between society as it was then and what it is at the present time, the writer remarks, is the contrast of veiled privacy and open publicity and she assures us that society in the future will become more and more democratic. Amidst all its frivolity, however, the author points out, one great advance there has been in society during the last century. While in a former generation there was such a gulf between the rich and the poor that the former never thought of interesting themselves in the latter, modern society does all it can in the work of helping others which, after all, must be the aim of life—"one and all even the most frivolous are ready to give their time and money to help hospitals, bazaars etc., though much remains to be done." But as regards society in the future, the author's prophecy is that "everything that makes life a thing of beauty will disappear, motor-cars will ply along the country roads, formerly so peaceful, and mechanism will daily more and more take the place of manual work and stamp out all poetry and romance."

—o—

## THE TRIMURTI.

This is the subject of the third of the series of articles "In Defence of Hinduism" contributed by Mrs. Annie Besant to the *Central Hindu College Magazine*, Benares:—

The great religions of the world, both ancient and modern, with but one exception—that of Islām—have taught that the supreme Ishvara manifests Himself as a Trinity in His universe; that is, that He shows forth a triple nature, embodied in three distinct forms. This is one of the most ancient teachings, and in its universality and its antiquity it bears the hall-mark of truth. The Jewish religion, that which is most closely related to that of Islām, laid comparatively little stress in its popular teaching on this triple nature of the supreme Ishvara, the circumstances surrounding it leading to the chief stress being laid on the divine unity; but in the Rabbinical teachings, those representing the learned and philosophic Hebrews, the tripleness of the divine nature was definitely taught.

This triplicity—threeness—is seen to be a necessity, as soon as we consider the relation of Ishvara to His universe. It is this relation which renders it inevitable that He shall manifest Himself in three distinct characters, and no more, as the Supreme Lord. For a particular universe has a beginning; no universe has always existed; each is a temporary arrangement of Purusha and Prakriti, spirit and matter, and this temporary arrangement has a beginning. For this Ishvara manifests Himself as the Creator, and fashions and shapes the universe in that character. The universe being created—not "made out of nothing," but fashioned out of the everlasting materials—it is necessary that it should be maintained, preserved; hence He manifests Himself as the Preserver, and supports the universe, being the continuing thread on which all its changing parts are strung. But a universe, a thing of time, cannot last for ever; it becomes old and ready to perish, worn out, fit only for destruction—that is for being reduced again to its original elements; hence He also manifests as the Destroyer, dissolving the universe. Then the Three merge into One and there is sleep. Thus the Days and Nights of Ishvara follow each other.

Mrs. Besant observes that though the Three are thus fundamentally One, yet each root-characteristic of creation, preservation and destruction is embodied in a Form, a Person, a Being, and these three are the "Three-form," the Trimurti.

The Creator is Brahma, and He is sometimes represented as four-faced, each face representing one quarter in space, so that His attention is turned in every direction. Also He sits on the Lotus,

## ब्रह्माण्मीशं कमलासनस्थं,

as Arjuna saw Him, when Shri Krishna revealed His divine form. The Lotus is the symbol for spirit and matter—fire and water—and thus is the right seat for Him who fashions spirit and matter into a universe.

The Preserver is Vishnu, whose name means that He pervades all, enters into all, and thus supports and maintains all. He is symbolised with four arms, again for the four quarters in space, as though His arms were spread out

in each direction to uphold and protect. From Him, as the Preserver, come all the Avatars, the Beings in whom He descends, as it were, showing out His powers as the Preserver, when the world is threatened by the powers of evil.

The Destroyer is Shiva, Mahadeva, whose name means welfare, happiness, beatitude, for as He dissolves the forms and draws the lives into His bosom, His peace enfolds all, and they enter into blissful rest. The name "Destroyer" sounds harsh in some ears, and perhaps the "Liberator" would have a sweeter, and therefore a truer sound; for He liberates the Jivas from their sufferings and leads them into the Peace. His symbols are the tiger-skin and the snake, and the guise of the ascetic; the tiger-skin marks the death of the lower nature, for the lower nature is the tiger that we all have to slay, and the wearing of the tiger-skin means that that nature has been slain. The snake is the symbol of wisdom, and He who wears them as His garlands has supreme wisdom as His Ornament. The guise of the ascetic is the sign that work in the world is only carried on for the world's sake.

Prayer is addressed most generally to Vishnu, or to His Avatars, as Shri Rama, Shri Krishna, because He is the Preserver and the Ruler of the world, the constant support and life of all, the Father-Heart that is ever loving and protecting His children, that understands and compassionates every weakness, and is always ready to help and strengthen. All that is glad and bright, and beautiful in external nature and in human life is part of His splendour, and feebly expresses a portion of His beauty and His attractiveness. He is the God of the householder, of the family, of the home, brooding over all in protecting love.

When men are turning away their hearts from the world and are weary of its changes, of its joys and its pleasures as well as of its pains and griefs, then comes the time when the austere beauty of Shiva attracts them even more than the joyous grace of Vishnu, and the tiger-skin and the serpent allure more than the peacock-feather and the flute. He is the God of the ascetic, of the Yogi, of the closing stages of life, the Vanaprastha and the Sannyasa. Devotion to Him means approaching Peace.

Such are a few of the thoughts that grow out of thinking on the Trimurti, the forms in which God reveals Himself to the world.

—o—

## THE CRISIS IN GREAT BRITAIN.

This is the subject of an article in the May number of the *Open Court* from the pen of the Editor, Dr. Paul Carus. Dr. Carus is, most evidently, one of those who regard the war in South Africa as most unwise and as betraying a sad want of foresight in those responsible for it. The fundamental question he would consider in determining the right of a man to govern a country is, if he has the "power to keep order and preserve peace." In the light of this test, the cause of the English in the South African War has no justification, and

England has to justify her policy only by establishing order and showing that she is capable of maintaining it:—

The English are in a desperate position. They have taken the capital of the country, and driven the president, poor old Oom Kruger, into exile; they hold the open field and have disbanded and disorganised the Afrikaner armies. But scattered Boer forces are still in the field and prevent the restoration of order. No train can run without being exposed to attack or being in danger of being derailed and wrecked. And this condition of things has become chronic. How is it possible to develop the country, establish industries, work the mines, if a handful of unruly marauders have the sympathy of the population, while the authorities in spite of their best intentions are hated as foreigners, invaders, conquerors, and usurpers?

Perhaps the most prominent of those who have opposed the present ministry is Mr. Stead, the well-known Editor of the *Review of Reviews*. He has fearlessly written and spoken on the subject of the present war but his countrymen have not listened to him. We have no space to reproduce here all that Dr. Carus says about Mr. Stead's works, but the following excerpt will serve as a sample of the strain in which he writes:—

Mr. Stead, whatever his antagonists may say against him, is a man who has the courage of his convictions. He is not afraid to call a spade a spade. He has been called unpatriotic, but at heart he is a good Briton. He is as truly British as Junius was in the days of the revolution of the American colonists. His patriotism is different though from the common type: it is no jingoism. His patriotism rebels at the thought of having a blot on the escutcheon of England, and he insists on having it removed.

Some speak of the decline of England; and undoubtedly English prestige has suffered greatly of late. But so long as England breeds a Junius *redivivus*, such as Stead, we need not despair. Mr. Stead represents the national conscience, and though he may be a voice crying in the wilderness, still his voice is heard and may be regarded as a symptom of the health of the national life and as an indication of the strong reserve of moral power. The British government may forbid Mr. Stead's writings to circulate in South Africa, but they would not dare to suppress them in England.

The present situation becomes more complicated by the crisis in China. "England suffers Russia to take Manchuria because she needs her armies in South Africa" and yet there is more at stake in China than in Transvaal. Dr. Carus feels certain that England would gain in power and would fortify her position in South Africa, if she would give back to the Transvaal her independence and

thus have her hand free to assert her position in other quarters of the globe.

To gain this end a clear-headed wise man is the first desideratum, who will steer the ship of State past the cliffs and rocks that threaten her destruction.

Lord Salisbury has given Mr. Chamberlain too much rope, and considering the many former mistakes he made during his administration which have been too easily condoned by the English voters, such as his protection of Dr. Jameson and his blunder in the Venezuela question, he ought to be replaced by a man who is at once firm as Lord Beaconsfield and considerate as Mr. Gladstone. When Edward VII. mounted the throne he had a good chance to make a change without doing any harm to the dignity of Great Britain, and the opportunity has not yet slipped away. The sooner it be done the better, for the time will come when the voters in England and Scotland will resent the great sacrifices of precious lives as well as the enormous drain on the pecuniary resources of the people, and then the British government will be compelled to do what it might do now voluntarily and graciously.

#### THE GIANT STEEL TRUST.

Mr. Gleed's delightfully graphic account, in the May number of the *Cosmopolitan*, of the Steel Corporation of the United States, shows how gigantic a distinctly business enterprise can be developed to be when its promoters are shrewd business men. It will be seen from the account that the Steel Corporation is due to the enterprise of the principal steel companies of the country, and not of one company, each having vast properties, in most cases widely scattered, and in each case having enormous issues of stock and bonds outstanding:

These constituent companies were themselves the result of great consolidations. Many hundreds of properties all over the country, doing like lines of business, had been brought together under the names quoted. Each one of the companies named had made up its list of companies which seemed naturally to belong together; had computed the possible economies, total earning power et cetera; had translated the possible net profits into capital and issued securities accordingly for the acquisition of the properties.

Of course the first task of the organisers of this concern is to appraise accurately the value of the constituent companies and then allot to each its due proportion of the new securities. These are three hundred and four million dollars of five p.c. gold bonds, five hundred and fifty million

dollars of seven p. c. cumulative stock preferred and five hundred and fifty million dollars common stock. The capitalization of the new company is a credit to the enterprising citizens who have made it a possibility. It is one billion one hundred millions in stock and three hundred and four million dollars in bonds. Mr. Gleed says :—

It exceeds twice the amount of the capital stock of all the national banks in the United States. It is about the same as the average annual supply of currency in the United States in the past twenty years. It exceeds, after deducting cash in the Treasury, the public debt of the United States. The pay-roll of the new company will amount to five hundred thousand dollars per day, or one hundred and fifty million dollars per year of three hundred days. It will employ two hundred and fifty thousand men, who will directly support a million persons more. This is like studying astronomy!

Financially, the company is backed by men who are amongst the greatest financiers of the world, men, such as Mr. Bacon, Mr. Steele, Mr. C. M. Schwab, Mr. C. Frick, Mr. Morgan, and Mr. Andrew Carnegie. And what the company will earn may be regarded as a question of world-wide importance. It is expected by those nearest the affairs of the company that the earnings this year will be increased over those of last year at least ten per cent, the earnings of the constituent companies of last year amounting to about one hundred and sixteen million dollars net. The prospects of the company are good. We read with peculiar interest that :—

there seems to be no part of the world which is now not a market for American steel products. We are building and equipping Russian Railways. The American Bridge Company captured the contract against British contractors for bridging the Atbara River in the Sudan. American cars and locomotives are already doing service in England. The steel work to be done in the near future in China, Russia, Mexico, South America and Africa is so vast in amount as almost to dwarf the capacity of even this new company.

Guessers say that the world used but a few thousand tons of iron a year five hundred years ago. The use now is near fifty million tons. Last year the output of the United States alone amounted to 14 million tons which put that country about 5 million tons ahead of its chief competitor, Great Britain. This shows the possible foundation for the Corporation referred to above. The discovery of the process of treating iron so as to make

steel, worked a revolution in the adaptability of iron to industrial uses. And the United States is now making over 10 million tons of steel per year. Considering the present great uses for steel and hundreds of more uses now in contemplation, it is hoped that the United States Corporation will prove a profitable organisation. If such is to be its future it will mean "steady work for employees, steady dividends for the owners, steady markets for the people" and, we may add, steady prosperity for the whole country.

—o—

#### RUSSIA'S HOARDED GOLD.

Mr. Malcolm J. Talbot writes a very clear and readable account of this in the May number of the *Arena*. The "Hoarded gold" of Russia is otherwise called the "Sacred Fund"—name significant—and the bumper condition of this Fund discloses a combination of creative and conservative force that is pregnant in possibility in the building of a world-empire. The financier will see in it the foundation of a credit too secure to be easily shaken by the fiercest industrial storm. The merchant will see in it the promise of stability in every department of national life. And to the ordinary individual, it betokens a possibility of growth, development and progress. Does the reader know what such an accumulated wealth is? It is the fabulous sum of \$ 4,000,000,000; to this an average amount of \$ 50,000,000 has been added every year, which shows the inflexible persistence of the Muscovite. And what is the greatest tribute to the Church to which the keeping of this hoard has been entrusted is that it has not been touched upon to the extent of a single ruble, through all wars that have come and the gigantic projects for internal improvement. The Crimean war, the multifarious military operations in the Balkans, in the Trans-Caucasian range, in the Turkestan and Manchuria and the construction of state-railways stretching across two continents—all these have not touched this "gold fund." This wealth has come from two sources. In the first place every subject of the Czar from the high-



est Governmental officer makes a contribution to the Church which, as said above, is in charge of this fund; secondly from the products of the gold mines worked by the Government.

From this the position of Russia in the family of nations can be easily fixed. As to the moral influence of this wealth upon Russia, who can tell? Contrast this policy of the country to hoard money with the present foreign policy of her Government, where will the "Shadow of the Bear" be then? The writer, assures us that the purposes of Russia are purposes of peace:

That Russia does not propose to plunge into war, and pour out her immense treasures of blood and money for a stretch of Asian desert, practically all critics agree. In her railroad building she has looked well to the possibilities of military operations, but the immediate—the primary—result of those railroads will be to unlock the limitless natural resources of the country and open to them the markets of the world.

If, then, it is true, as it undoubtedly is, that should war come it would find Russia equipped with sinews and agencies of war unsurpassed, it is equally true that with her face set steadfastly toward learning the arts of peace, these same agencies will prove as potent in the accomplishment of that end.

—o—

#### PRIMITIVE INDUSTRIAL CIVILIZATION IN CHINA.

Most of our readers are aware that China has remained practically closed to the outside world and that the people of China have taken but small part in the world's commerce; but not many perhaps are aware that the Chinese market is so vast and the possibilities of commercial expansion are so great that the Powers have been striving to bring this great unexploited region under their control. There is a fine article in the May number of the *Chatanquan* contributed by a Mr. Guy Morrison Walker and it contains a plain account of the peculiar industrial and economic conditions which prevail in China at the present day. According to this writer, the reason why the Chinese population contributes little to, and takes scarcely anything from, the commerce of the world is not to be found in the character of the people but in the "utter lack of cheap and rapid means of transportation and communication between the different parts of the Empire." For ages Chinese industries

have been carried on by the most primitive methods upon a diminutive scale.

The great problem in China for centuries has been how to equalize the great supply of labor that has existed in every community with the limited home demand for it. The community has preyed upon itself, and the constantly increasing supply of Chinese labor has met a steadily decreasing demand, and wages have been reduced to the lowest possible point at which human existence can be maintained. Chinese opposition to labor-saving machinery is due to the realization of the fact that the hand power of production is already practically unlimited, and that any attempt to introduce machinery without finding new markets for its products would but make the condition of Chinese labor worse. It is in their endeavour to utilize this enormous supply of human labor that the Chinese so frequently use men, women, and boys for draught purposes. It is a common thing in many parts of China to see small ploughs, held by a single handle, drawn by men, women, and domestic animals all hitched together. Much of the transportation is carried on by wheelbarrows which are habitually drawn by one or two men in front, while one man behind holds the handles of the wheelbarrow to guide it. Along the rivers and canals great strings of panting men follow the two-paths, drawing the heavily laden boats, singing their woe "wind songs" in the belief that the songs will bring a lucky breeze which, catching the sails of the boat, will lighten their burden for a moment. Mills which employ stone rollers are habitually operated by human labor, the work usually being done by the older women of the family, those whose failing strength or poor eyesight makes it impossible for them to do the heavier or finer work of the household. When the grain is ground it is not placed in any fancy bolting machine, but it is poured into an ordinary sieve made to slide in grooves over a box, which a man seated on a stool at one end of the box jerks back and forth until only the bran is left.

It is easy to see from this, the great field that can be found in China for milling machinery. This is not the only peculiarity of Chinese industry. The empire is better supplied with coal deposits than any other country in the world, and yet, we are assured, coal is but slightly used as fuel.

The reason for this is that the coal, which, with the cheap human labor used, costs in many places not more than twenty-five cents per ton at the mouth of the mines is raised by the cost of transportation to a price of from six to eight dollars per ton after it has been carried a distance of thirty or forty miles. This means a month or a month and a half's wage to the ordinary Chinaman, and at such a price coal is beyond the reach of the poorer people.

The costliness of iron in China is shown in many curious ways:—

The iron kettles are beaten out by hand, and while the rim is left thick to give it stiffness, the bottom is beaten almost as thin as paper; firstly for the purpose of saving metal, and secondly in order that as little fuel as possible may be required to make the bottom of the kettle hot enough to cook the food. In many parts of the country workmen find the metal so precious that they cannot own

a variety of tools or implements, one or two only being within their means. Should they desire tools of different forms, they seek the village blacksmith or wait until the arrival of one of the travelling blacksmiths who roam about the country, and whose chief business is to beat tools of one kind into other shapes to satisfy the latest needs of their owners.

There are some curious instances where machinery seems unable to compete with cheap Chinese labor: One of these is found in the manufacture of lumber:—

A log is braced up and two men, one standing on top of the log and the other crouched beneath it, saw it into planks with a large frame rip-saw drawn up and down. It would seem that if there was any line in which machinery could displace hand labour it would be in this, but it has been found by trial that the steam saw-mill cannot compete with the Chinese hand labour for this purpose.

We have quoted from the article at some length to show the possibilities and difficulties to be encountered in Chinese trade, to show also the menace which the introduction of cheap Chinese labor means "to the high-priced labor" of other countries. If the powers are allowed to divide China their first efforts will be "to build up and establish factories for the purpose of utilizing this cheap Chinese labour." And Mr. Walker, who is presumably an American, does not want that America should remain unconcerned in the prospective partition of China:—

The condition in that country calls for the exercise of the highest type of far-seeing statesmanship. From our position in the Philippines we can look over into China, the promised land of the industrial world. The development of her industries and the possession of her markets will ensure our control of the commercial world. The opportunity before us must be seized now or lost for all time.

—o—

#### THE TWO GREAT POEMS OF INDIA.

In the course of a pleasing article on this subject in the April number of the *Metaphysical Magazine* Mrs. Arthur Smith shows a keen appreciation of the sentiments of the ancient poets of India. Without being didactic, she essays her subject to leave the lesson with the readers that the works of the Indian poets and philosophers were no cobwebs spun by idle brains but the "natural flowers of great minds that could from a Himalaya-like philosophic attitude take a sweeping and sympathetic survey of the human race." It was Goethe that said of the charming drama, *Sakuntala*, by Kalidasa "Would'st thou the heaven and earth in one sole word compress, I name *Sakuntala* and

so have said it all." Mrs. Smith is not less appreciative:—"The characters are, she says, "bolder and purer than that of Homer, the picture of domestic life touching, children dutiful, parents careful of children, wives loyal and obedient, and yet independent in opinion and peace reigns in the domestic circle." And what is the most interesting characteristic of the oriental Muse?

It is the spontaneous transport of an inspired and free imagination, infusing a divine soul through all dead substances, melting everything into its own mould, filling a new universe with new marvels of beauty and delight. The poetry is as the clime, vast in mystery, warm with passion, far-vistaed with revery, rich in jewels, redolent with perfumes, brilliant in colors, and inexhaustible in production.

The translation of the *Mahabharata* by Mr. Protap Chandra Roy and that of the *Ramayana* by Tulsi Das come in for praise as also Sir Edwin Arnold's translation of the "Great Journey" and many "Parvas" of the *Mahabharata* which have made this great epic familiar to all lovers of oriental thought. To the English student, the sentiments depicted by the poets, are interesting on account of the insight they afford into the traditional sympathies of the people.

One special feature of these stories is that they have a different meaning for every stage of human growth. The ordinary man as well as the philosopher understands them, each in his own way, for these stories were composed by men far advanced on the ladder of human progress—some of them on the topmost rungs. Here principles are taught through the stories, and in these poems the ideal society is shown, not as a millennium on earth, where there will be nothing but peace, joy, and equality, but where religious toleration, neighbourly charity, also kindness to animals, are leading features, where the fleeting concerns of life are subordinated to the Eternal; where man strives not to externalize but to internalize himself more and more, and the whole social organism moves, as it were, with a sure instinct towards God. The truest social reform has come from men who strove to be good—men from whose personal goodness sprang social advancement, as noiselessly, as naturally and beautifully as the perfume from the flowers.

Centuries rolled away before the *Ramayana* and the *Mahabharata* appeared and more centuries will pass before others of their kind can come into existence, and the benediction of the author is that, though not older than the mountains, the two great poems of India will live longer than they and have more influence. Such is Mrs. Smith's appreciation of the *Ramayana* and the *Mahabharata*. There are, in the article, however, several errors not all of which can be ascribed to the carelessness of the printer's devil. For Kalidas we have Kaladas, Sahadev is put down as Sahaved, Nakula appears as Makulas and the Pandiyas as Panday. Perhaps such errors are pardonable in a foreign writer of Indian names.

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## AMERICAN AGGRESSIVE IMPERIALISM.

Under the title of the "Passing of the Declaration," the leading article in the *Arena* for April exposes in strong language the inconsistency between the sentiments of equality and justice embodied in the American Declaration of Independence and the aggressive Imperialism of modern American policy. To some extent this tendency to usurp power or impose its power on other States has always been inherent in the Anglo-Saxon, however unwilling he may be to acknowledge it or call it by its proper name. From American history itself the writer draws some illustrations of this divergence between ideals and practice, so destructive of the Anglo-Saxon's reputation for sincerity in his high-sounding professions of universal benevolence in international matters. To begin with, the very form of American Government is more *regal*, (as opposed to *parliamentary*) than that of England, the President having far greater powers of veto and initiative than the sovereign of England or in fact any European monarch except the Czar or the Sultan. Then, how can the Government be truly described as being a "Government of the people, by the people, and for the people," while the women of all the States except five, and all men under twenty-one years of age, and all inhabitants whatsoever of the territories are excluded from any share in it? Again so early as in 1846, the United States began to violate openly the "inalienable rights of man" and aggressively conquered and annexed a piece of land for the extension and perpetuation of human slavery. The American Civil War itself is perhaps a capital instance of the unwarranted exercise of imperial powers by the Government; for though the world has good reason to rejoice in the final outcome of that war, the right of succession having been expressly reserved by the Southern States before entering the Federal Constitution, the action of the United States Government towards the South was imperialistic and usurpative in the extreme and there is no possible constitutional or legal aspect that can

make it anything else. Coming now to the latest instance of aggression, the Spanish-American War, it can only be described as the accomplishment, under cover of a chivalrous sympathy for the oppressed, of a long cherished design of annexing Cuba and the Philippines. Europe understands this perfectly, and is herself sufficiently accustomed to that sort of procedure to experience no surprise at the embarkation of the United States in predatory warfare. The result of all this is the uncovering of the essential humbug of the Declaration of Independence and the demonstration of the pretence and insincerity of the American people's devotion to its doctrines of the "consent of the governed," "inalienable rights of men," "just powers of Government," "freedom and equality."

Expressions of this nature are mere claptrap phrases of the demagogue that sound pleasingly to the popular ear, but have no meaning in the facts of the world. They are not true in law; they are not true in history; they are not true in the possibilities of the human race. The right thing to do is to drop these sentimentalities of speech. They hamper and contradict the public policy of the Empire and make their professors appear hypocritical in the eyes of the world.

In discarding the Declaration of Independence, then, we shall lose nothing of political or moral value. We shall merely drop a few glittering phrases of French sophistry and exploded sham borrowed from the agitators and pamphleteers of the revolutionary period, and which never can become a serious part of any system of political truth.

We are engaged in building an Empire; that is to say, a great Nation, which is to incorporate other peoples and extend its laws and Government to remote corners of the earth. This will necessitate the employment of methods distinctly hostile to the ideals of the Declaration of Independence. The extinguishment of petty States means the abrogation of the doctrine of self-government, but it should occasion no regret. It is not the course of Empire in conflict with the God-ordained principles of justice; it is presumptuous fallacy disputing the right of way with progress and necessity. The subjugation of small, independent States and their assimilation by the great powers will remove the most fruitful cause of international jealousy and discontent; and it is the only proposition that offers any assurance of the ultimate fulfilment of the world's dream of universal peace.

## DEPARTMENTAL NOTES.

## Educational.

(By a Headmaster.)

## ELEMENTARY EDUCATION IN ENGLAND.

This forms the subject of a short but telling contribution the April number of Harmsworth's "*New Liberal Review*." The writer is Mr J. Macnamara, M. P., the well-known educational reformer.

The main point of his article is that the intellectual side of Britain's resources is developed rapidly and is given a prominent place in her imperial programme. John Bull will find himself, as the Americans say "left." Reviewing the present condition of elementary education, Mr. Macnamara says: "Six and a quarter millions is the total of working-class children in this country. Three-quarters of a million of this total are, after 30 years of the Education Acts, absolutely and entirely unknown to the Educational authorities. These wretched little derelicts, the children of thriftless, indifferent, self-indulgent parents in the main, are slouching on through a childhood of misery and destitution to a manhood and womanhood of crime and social failure. Nobody bothers much because the care of the youth of the nation has not yet been touched with the hand of a generous Imperialism. Of the five and a half millions of working-class boys and girls whose names are on the rolls of the Public Elementary Schools, a million attend with such shocking irregularity that the education they receive does them about as much good as the smoking viands do the hungry tramp who is on the wrong side of the cook-shop window. The poorer parts of our great cities swarm, during school hours, with these forsaken little gutter-graduates, because nobody views education as a potential factor in National Defence.

Then, again, of the 4½ millions of children who attend regularly, many at the most tender age are compelled to work long hours both before school in the early morning and after school well into the dead of night. The eight-year-old scrap of humanity who hangs the milk-can on your door handle at six in the morning, or stuffs the newspaper under your door, and the nine year-old veteran in the struggle against want and wretchedness who shouts "'xtra speshul" along the greasy street—these are the real items in the Imperial make-up. Only nobody bothers about *them*. You may have a Royal Commission on Horsebreeding no doubt. But who cares about these? You may erect a college for the Arabs of the Kordofan. But who bothers about the Arabs of the New Cut?

Take another phase of the question. Half the working-class children of the country attend schools which depend for their local support upon voluntary contributions. What a farcical anachronism to expect to provide for the intellectual equipment of the people through the medium of private charity! Go into the Elementary School. Note the terrific size of the classes; observe the fact that a fourth of the teachers are merely children themselves; consider the paltry and grudging spirit with which the whole thing is carried out, and you will gradually understand why it is the Cheddar cheese is nowadays nearly all American: Devonshire butter nearly all Danish: Birmingham small arms frequently German: Staffordshire rails often Belgian; and Derby locomotives Transatlantic!

The writer's remedy for this state of things is thus described. The first thing is to insist that the intellectual equipment of the people shall be treated as a national question, and not as the shuttlecock of contending factions. More money must be spent on education. At present when you ask for more money in the House of Commons you only get a cheap sneer from that perplexity—Sir John Gorst.

The children must remain at school longer; many of them must be attended more regularly; they must be taught in smaller classes and by more highly-qualified teachers. The idea of maintaining education by voluntary contributions must be given up. The charge must be mainly, if not entirely, a national charge, so that the poverty-stricken rural area may have removed from it the excuse that is compelled by its necessity to starve the education of the children. In each county borough and county area we must have a strong local authority supervising all grades of schools within its area. These schools—Primary, Higher Elementary, Secondary, Technical and University—must be linked together so harmoniously that the lad of parts may be carried forward from one grade to the next without let or hindrance. This, in order that the Empire of the future may have men upon whom it can rely in all departments of public life to carry forward the British heritage appropriately.

## ANGLO-INDIAN SCHOOLS FOR BOYS.

Writing about the Anglo-Indian schools in India in the *Educational Times*, a Mr. George Cecil criticises the condition of these institutions in general. The Anglo-Indian Schools are set apart in India for the education of the English and Eurasian youths whose homes are in India and whose parents or guardians cannot afford to send them to England. These scholastic institutions while being distinctly inferior to the smaller English

grammar schools, are, the writer points out, by no means all that could be desired, and for the following reasons:—

In the first place, the masters are of an inferior class, and, consequently, are apt to exercise a bad influence on a boy's secondary education. Secondly, the Eurasian, and, alas! sadly undesirable, element preponderates in such schools, greatly to the detriment of their well-being. And, in the third place, the altogether objectionable system of making an undue use of native servants results in the Anglo-Indian boy becoming lamentably wanting in self-reliance and resource. It may also be added that the tone of the schools alluded to is dreadful—"bad" is hardly a word which describes it; the manners, customs, and intelligence of the half-caste boy are such that they render him a very undesirable companion.

The habit of depending on native servants seems even to affect the Athletic Sports and competitions. "It is on record that an Anglo-Indian scholar, when about to compete for the 'hundred yards under fourteen', has withdrawn from the contest, because the native domestic has not been present to help him off with his overcoat. The Eurasian Captain of the eleven—a decrepit youth of nineteen—will expect the Aryan in charge of the roller to fasten his pads for him; and he has been known to order the menial in question to convey for him his bat to the wicket when he is called upon to take his innings."

But such schools serve their purpose in as much as they provide their inmates with a course of instruction which enables them to pass the necessary Government examinations and thus to secure a living. And though it is doubtful that they acquire in the schools everything worth learning, the writer would not recommend their abolition, patronised, as they are, by Anglo-Indian parents "only through stress of circumstances."

#### THE GULF STREAM FALLACY.

Mr. H. M. Watts has a spirited protest against the current teaching of Geography books in regard to the heating effects of the Gulf Stream. He contends that it has no influence at all on the weather or climate of North Western Europe. The mild climate of that region is due to the prevailing eastward and north-eastward drift of the circumpolar atmospheric circulation, the aerial currents of which, and not the Gulf Stream, distribute the heat conserved by the whole Atlantic Ocean north of latitude  $35^{\circ}$  over Europe. The Gulf Stream, itself a result of wind motion being produced by the joint action of the Atlantic anticyclones, is not distinguishable in temperature or 'set' from the rest of the ocean by the

time it gets east of Newfoundland. Yet it has been given the credit that belongs to the whole mass of the Atlantic, so far as the latent power to affect climate is concerned, while at the same time the determining function played by the aerial currents of the great circumpolar drift is completely ignored. The same fallacy prevails as to the power of the Japan current to affect the coastal climate of North-Western North America.

#### QUANTITATIVE SCIENCE WORK IN SCHOOLS.

Prof. Armstrong defends in *The School World* for May his suggestion that the teaching of science in schools should include some quantitative work done by the pupils themselves. This had been questioned by Mr. Abbot, who had concluded his letter by saying that he would not accept Dr. Armstrong as a guide in psychology. The professor has some sneering remarks on psychology as it is learned by teachers, and seems to say that the benefit of 'psychology' is almost nil. It has created the 'tyranny of the book,' and a dislike and incapacity for active original work with tools. The professor thus winds up: "I would venture to urge teachers to eschew psychology until they have had a little sound, thorough, elementary training in qualitative experimental work,—and until they know what R-e-s-e-a-r-c-h spells. It must soon be that such knowledge will be exacted of teachers as essential to competence."

#### STATE SUBVENTION TO UNIVERSITIES.

Appealing to the Treasury for aid on behalf of the London University, Prof. Silvanus Thompson quotes the following figures: The University of Paris received from the Government £ 120,000 per annum for 12,000 students. The University of Berlin has £ 105,000 per annum, making about £ 21 per student. The University of Rostock has £ 33 per student. The University of Edinburgh £ 9 per student, that of St. Andrews, £ 45, and that of Stassburg £ 44 per annum per student!

#### AMERICAN EDUCATIONAL EXHIBIT.

Some of the lessons that English teachers may derive from the American Educational Exhibit at Manchester are summed up by Mr. Fabian Ware in a lucidly written contribution to the *Journal of Education*. Some of these are worthy of reproduction in India. First, here is a contrast between the French and the American systems:

France and America are the two modern exponents of democracy based on the "rights of man." We would expect, therefore, that each would be true to the foundations of its polity in recognizing and fostering the rights of every individual to the fullest and highest education. While the French Government, however, is every year strengthening the regulations which direct the children

of the poorer classes towards technical instruction of a specialized type within what may be termed the secondary sphere, America still considers free secondary education needful for the development and progress of its citizens. The general absence of any technical instruction of a lower grade than that which is the crown of a sound general secondary education is the first thing that will strike the people of Manchester who visit this exhibit, and may cause greater heed to be paid to the voices raised in their midst against the cardinal error in the present educational development of England.

The co-education of the sexes seems to be a success in the primary standards, so far as it has been tried in India. But it is not tried to any great extent, and the last quinquennial report of the Government of India seems to point to this co-education as one of the most feasible plans for advancing female education. American example would appear to favour the idea.

Among other general features, the wide-spread system of co-education should be noticed. It is to be found in about two-thirds of the total number of private schools and in 65 per cent. of the colleges and Universities, it is the general practice in the elementary schools; and, in response to Dr. Harris's inquiries, of the fifty principal ones enumerated by the census of 1890, four reported separation of the sexes in high schools only, two reported 1892 separation in all grades above the primary, and both separate and mixed classes in all grades. Of smaller cities, only twenty-four reported separate classes for boys and girls in different grades. When these figures are taken into account the large proportion of women teachers in American schools is not surprising; though it should not be forgotten that the Civil War gave women a unique opportunity of proving themselves to be public substitutes for men.

The munificence, public and private, of the Americans towards education is so well-known that the following tract from the paper scarcely excites surprise:—

The cost of whole exhibit must have been enormous—on a rough calculation, five times as much as that of 1893; but then our Transatlantic cousins have never grudged money to education. It is with justifiable pride that Prof. M. Butler tells us, in his introduction to the admirable series of monographs published for free distribution in 1893, that the vast sum given in aid or endowment of education by individuals "recalls the best tradition of theinces and churchmen of the middle ages, but is on a vastly larger scale." He says that "an unofficial estimate of the amount given by individuals during the year 1899 in Universities, colleges, schools and libraries is over \$1,000,000 dollars." Evidently some good follows in the trail of the trust." It is to be hoped that this beautiful exhibit will encourage English teachers to take a greater interest in the educational achievements of all Anglo-Americans across the seas. Manchester, in bringing the fountain to Mahomet, has shown commendable tact and energy.

### Legal.

(By A High Court Vakil.)

#### JURY ROOM DIVERSIONS.

A writer in the April number of the *Green Bag* contributes an amusing article entitled "Jury Room Sentiments and Diversions" as disclosed by inscriptions on the walls of a jury room in a court-house in Brooklyn. These writings set forth in prose and poetry the doings and sentiments of the average juror and portray not merely the juror's views as to the merits of the particular case he is trying, but also his opinion of his fellow-jurors. Here is the contempt of a juror who said:—"Jury business be damned" Nor is this the sentiment of a single, isolated, disconsolate juror, for, underneath these words another juror has written: "I endorse the above." This general sentiment is popular, as evidenced by the some what similar testimony inscribed by other jurors.

Another weary juror wrote:—"John Y. McKane. Twenty-five days jury and locked up here twenty hours." (The McKane jury had an unusually severe experience. For twenty-five days the jurors were under most careful surveillance, not only when going to and from the court-house but also during the time spent at their hotel. One of the jurors said that the only bit of news of the outside world which came to him was the result of a famous prize fight which was being shouted by a newsboy outside the hotel windows.)

In addition to seeking diversion in literary and artistic efforts, some jurors turn to philosophy. "Is this a free country!" asks one juror, writing on the wall, to which he replies with fine scorn: "Locked up all night!"

Another asserts that:—

"The jury system is the guard

Of human liberty,

But when you lock one up all night,

This truth one fails to see."

#### COPYRIGHT IN PHOTOGRAPHS.

A short story in a recent number of *Hansworth Magazine* raises an interesting question as to the present state of the law on the subject of copyright in photographs. It seems, that copyright in photographs which are not commissioned belongs to the photographer if it is reserved in writing. In commissioned work, the negative and the glass on which it is, are usually considered to belong to the photographer while the copyright belongs to the person who gives the commission. In Pollard v. Photographic Company, 60 L. T. Rep. 418, a person who had taken a negative likeness of a sitter, a young lady, to supply her with copies for money, was restrained from selling or exhibiting copies on his own account, both on

the ground that there was an implied contract not to use the negative for such purposes, and also on the ground that such sale or exhibition would be a breach of confidence.

In the recent case of *Levy v. Clements* (Mass.), 50 L. R. A. 397, it was held that an engraver who is employed to make dies from photographs, and to print pamphlets containing cuts made from them, has no right to use them in pamphlets for advertising his own business, and, where he does so, and the pamphlets are delivered by mistake to his employer, that the engraver can neither compel their return nor recover any payment for them. The annotation to the case shows that this decision is quite in accord with the other authorities on the subject, and that the general rule is that one who employs another to make a plate or negative has the right to its exclusive use. This seems to be true even when the ownership of the plate belongs to the maker, and when he has the right not only to the possession of the plate, but also to destroy it if he chooses after he has made the copies called for by his contract. But, if he keeps it, he is denied the right to print copies from it for anyone except the person at whose instance it was made. The cases vary somewhat in the statement of the grounds on which they reach this conclusion, but they generally agree that it results from an implied trust or contract, and this is doubtless true.

#### COLONIAL COUNSEL BEFORE THE PRIVY COUNCIL.

The following questions concerning the professional privileges of a Colonial Counsel and the replies of the Privy Council thereto may be found useful:—

"Is a colonial barrister, not a member of the English Bar, entitled to practise in the Privy Council in any case coming from any colony, or only in a case coming from his own colony?" 2. "If a colonial counsel, being also a colonial Queen's counsel, is entitled to hold a brief in the Privy Council in a case not coming from his own colony, is he entitled to practise as a Queen's counsel in such case?" 3. Is a colonial Queen's counsel, who is also a member of the English Bar, but not an English Queen's counsel, entitled to practise as a Queen's counsel in the Privy Council, and if so, must he have a junior?"

The council reported as follows: "1. In reply to the first question—That they are not aware that any such case has arisen. It is doubtful whether the colonial barrister could demand of right to be heard in an appeal not coming from his own colony, but it is improbable that he would be refused. 2. In answer to the second question—That, if heard, he would rank as a Queen's counsel. 3. In answer to the third question—That he would be so entitled. That, so far as the council know, there is no rule as to a junior, but that, so far as they can ascertain the practice, it would be unusual for a Queen's counsel to appear without a junior."

## Trade & Industry.

*By Mercantilist.*

#### DRIED FRUIT INDUSTRY IN ROUMANIA.

A bill has just been passed by the Roumanian Chamber for the promotion of the Dried Fruit Industry. Under this bill, the Minister of Agriculture is authorised to advance money to communes and private individuals for the installation of ovens for fruit drying up to 60 per cent of the value of the ovens. Materials brought from abroad for the construction of such ovens will be free of duty. The advances are to be repaid *without interest* in seven equal annual instalments, interest at 5 per cent being charged on overdue payments alone.

#### TOBACCO CULTURE IN GREECE.

It appears that, encouraged by the success with which the Kavalla tobacco has been grown in Greece, the Hellenic Government has decided to devote special attention to the extension of tobacco culture in the country. With this object, large quantities of the seed will be procured, not only from Kavalla, but also from Trebizond, Havana and Maryland and experts will be engaged to teach Greek agriculturists the best methods of cultivation.

#### EXHIBITION OF CARPETS IN ASIATIC TURKEY.

An exhibition of carpets made in Asia Minor was to have been opened at Koniah on the 4th ultimo, under the direction of the Governor-General of the province. The exhibition will include carpets, "*kilims*," "*serdajans*," "*djidjims*," fabric for arm-chairs, and native-manufactured silk, wool and cotton curtains. Prizes of 4,000, 3,000 and 2,000 piastres will be awarded for the best carpet: "*kilims*," &c., and there are also prizes of 500, 300, and 200 piastres for the other articles. The judges will consist of four persons appointed by the Governor-General, and their decisions must be approved by the Administrative Council of the Province.

#### AID TO A NEW PIECE-GOODS FACTORY IN AUSTRIA-HUNGARY.

A firm intend to establish in the course of this year large piece-goods factory at Warasdin. The Hungarian Minister of Commerce has accorded to the enterprise every facility allowed by law for the encouragement of national industry, and, in addition, a large sum of money. The Municipality of Warasdin has gratuitously conceded about 14 acres of land and 500,000 bricks for building the factory and has exempted the Company from paying any municipal taxes for 15 years.

## GERMAN SCHOOL OF TOY-MAKING.

The German toy trade having declined seriously, the Government has established a professional school of toy-making at Grundhaiden, the idea being to encourage manufacture and export of toys, once a leading German industry.

## INDIAN TOYS.

Speaking of toys, we may state that Kondapalli in the Kistna district is noted for its toys. The evolution of the latter from the seasoned wood (ponuku) to the completed doll may not be uninteresting to our readers. After the wooden figure has been roughly shaped, it is held over the fire in a goldsmith's chatty with bamboo splits spread over it, in order to dry up the moisture in the wood, which is worked a few days after it has been cut. The head-dress (turban) and feet are made of tamarind seed mixed with resin and fine teak saw-dust.

## THE INDIAN IRON AND STEEL INDUSTRY.

The complaint is sometimes made that the iron and steel industry has not yet established itself in India. Before that desideratum is realised it is well to remember that natives of India need to be taught more how to use a tool than how to make it. This is the natural order of progress and at least one nation has gone through this process. Germany first obtained machinery from other nations in the initial stages of its advancement. When sufficient experience was attained in the use of such machinery, it began to make such as were required for its purposes. It has now become an exporter of machines and tools and implements.

## TO STICK PAPER ON METAL.

To do this, wash well with the ordinary soda the part of the metal on which the paper is to be pasted. Then rub the part so washed with a clean piece of cloth free from grease to take off the moisture. Brush the part so prepared with the juice of the onion and put the paper on in the usual way. The paper will not peel off and it will require special efforts to remove it.

## FRENCH POSTAL ENTERPRISE.

An ingenious automatic device for weighing and indicating the necessary postage for samples and third-class mail packages has been installed in French post offices, says *Morris's Trade Journal*. Instead of handing packages to the employes for weighing, one simply places them on the scales, and instantly there appears a little card stamped with the weight and denomination of the stamp or stamps required. Packages that exceed the maximum amount bring out a card with the words, "Too heavy."

## Medical.

By a Doctor.

## THE VALUE OF THE EUCALYPTUS.

One of the first, if not the very first, thing that makes its presence both seen and smelt by a visitor, for the first time to our beautiful health resort, Ootacamund, is the large number of eucalyptus trees that meet his eye at every turn of the road and on every slope of the hills in and about Ootacamund itself. So much so is this that it strikes a visitor (not a dweller, mind you) as curious, that he should hear the eucalyptus, or to call it by its more popular name, the blue-gum, spoken of as being more of a nuisance than otherwise. The groves, or more correctly, plantations of blue-gum trees, lend a pleasing effect to the landscape when viewed from a distance, but the solemn sombreness of the rough-barked, pillar-like stems has the effect of appearing gloomy and forbidding on nearer approach, though the pleasant, aromatic, balsamic odour which is always present about a blue gum plantation more than makes up for this gloomy appearance. It is hard to agree with the Ootacamundian when he grumbles at the "Everlasting Blue Gum" as he calls it, but it is a fact that the cultivation of this, in its place, most useful tree, has been overdone and many a hillside would be all the better if it could be restored to its original condition before it was covered with the blue-gum, which also has the evil reputation of impoverishing the soil. The blue-gum makes excellent fuel and where the question of fire-wood is always an important one, as it is in Ootacamund, this must be taken into account when making out a case against it. *Health* says that new discoveries are constantly been made in connection with the medicinal properties of the leaves and bark of the eucalyptus, while the essential oils produced from it possess the highest antiseptic qualities; in fact, so highly are they prized that a physician who has had large experience and practice in France recently stated that there are medical men in that country who claim that cures of consumption have taken place, by injection of eucalyptus oil, or its active principle, either alone or combined with other drugs. The eucalyptus is rich in an essential oil that is now much used in medicine and pharmacy, and in inflammation of the throat, sprays or inhalations of this oil are constantly advised by medical men, while toilet vinegar made therefrom is regarded with great favour for many purposes.



The leaves of the eucalyptus are filled with glands containing essential oil, which is extracted by distillation. The oil so obtained, has a pleasant and penetrating balsamic odour. The flowers, fruit, and bark are also filled with these odoriferous glands, but the odour differs from that of the leaves. To illustrate the firm hold which this tree and its health-giving properties have upon the public mind in a district where so many English people spend the winter, namely, Nice and its neighbourhood, we may mention that when the eucalyptus trees are trimmed as they always are in the early spring days in the public gardens and in the streets, the branches are eagerly sought by all classes of people, who hang them with their cones on the walls of their bedrooms, with the object of keeping off fevers and getting rid of mosquitoes and other insects.

#### DANGEROUS-FLANNELLETTE.

Flannellette, a fabric into whose composition both wool and cotton enter and which is popular chiefly on the score of cheapness, occupies a place midway between cotton and woollen fabrics. It is largely used for making under-garments, for children as well as adults, and in the case of children there is a risk of the under-clothing catching fire. A case recently reported in the *Lancet* of the fatal burning of a child whose under-garments were made of Flannellette emphasises this.

Cotton clothing, if set fire to, bursts after a brief period of smouldering into a bright flame which can be as a rule quickly extinguished. Woollen clothing if set fire to smoulders and does not easily burst into flame, but flannellette, if it catches fire, combines these two properties *i.e.*, it bursts into an intense flame that shoots along the cotton fibres of the fabric and this as it travels fires the fluffy woollen surface which is one of its characteristics. The heat given out is far more intense and the flame far more difficult to extinguish than in the case of either cotton or woollen garments. This can be proved readily by the simple experiment of taking a piece of flannellette and applying a match to it. Perhaps the danger of fire in this way is not so common in this country as it is in England, but still it is a real danger and one it is well to know of.

#### HYGIENE OF THE CYCLIST.

Dr. Just Lucas-Championniere states that cycling, like all other exercises, should be taken moderately. The heart should be carefully watched, not because this exercise is more harmful in this respect than others, but because it can be indulged in much longer without giving a sense of fatigue. Vicious attitudes, such as a crooked posture, although not being so important as is

generally supposed, nevertheless, ought to be avoided. In a long journey the position in which the body is moderately inclined is best for the organs of respiration and circulation. The position in the saddle is hard to decide upon for every case. Practice shows that the perineum accommodates itself to the saddle better than would have been supposed. Moderation in eating is a necessity in muscular work, as is also abstention from alcohol. The bicycle should vary in details for the man, the woman, the child, the racer, and the invalid. In the case of a man, the perineum, with its component parts should be carefully watched. As to the woman, this exercise is easier for her than for the man, since she is more supple. It causes far less fatigue than walking. Its effects on the pelvic organs are good. The child does not feel so much fatigue as the adult, but it should use the bicycle with the greatest moderation. As a rule the courier should understand his limitations well. He should, like all athletes, possess perfect organs. As to the invalid, many ailments are improved or even cured by the use of the bicycle, *e.g.* gastro-intestinal troubles, deformities of the vertebral column, &c.

#### EXCESSIVE PERSPIRATION.

*Health* prescribes the following bath to prevent excessive sweating and restore the skin to its normal tone :—

Provide a pail of water as cold as you can obtain, and another of water as hot as can be borne by the skin. Have a sponge or towel for each pail. Now, dip a sponge or one of the towels into the pail of cold water and pass it rapidly over the skin. Then immediately do the same with the other towel or sponge, which has been dipped in the hot water. Do this six or eight times getting at each bath three or four applications of hot and three or four of the cold water. This bath should be taken night and morning.

#### COLDS.

Perennially there appears a crop of new remedies for cold. This is conclusive evidence of the inefficiency of those that came before. We however, give the following cure for colds published in *Health* :—

The remedy consists in giving thirty grains of potassium bicarbonate every four hours in a glass of milk or cold water. The patient should rest for one or two days, and subsist on a concentrated liquid diet, all solid food being rigorously interdicted.

#### THE VIRTUES OF COMMON SALT.

A passion for discovering the virtues of common salt has recently broken out and some beneficent effects have been ascribed to it. The early attempts of Mr.

C. Godfrey Gumpel to awaken the people of India, rulers and the ruled, to the virtues of common salt proved vain and Mr. Gumpel has now come forward with a pamphlet on the "Prevention of Epidemic Zymotic Diseases" and makes no uncertain resolution. Lloyd Garrison on an analogous occasion said "And I will be heard" And he was heard. Mr. Gumpel denies that the closest research for preventives or curatives of plague and cholera by the cleverest and most devoted scientists have been in any degree successful. He is firmly of opinion that susceptibility or non-susceptibility is the key to the whole question in a cholera epidemic and he will have nothing to do with anti-cholera serum. Only the susceptible are attacked and to limit the susceptibility we are advised to take salt, in sufficient doses. Mr. Gumpel knows what he is talking about. His simple explanation is:—

In the tropics, evaporation from the skin deprives the body of water, thirst follows, and the habit of drinking copiously is soon formed. All liquid in leaving the body, carries salt with it, it washes the salt out of the blood, and unless the loss be made good, the individual's power of resistance is reduced and he becomes susceptible to changes in the weather or to infection of the serious illnesses which are too frequent visitors to all tropical lands.

"Common salt" declares Mr. Gumpel, "is the cuirass which protects the red corpuscles in the human body against the attacks of the greater number of pathogenic missiles." Sufficient consumption or interavenous injection of common salt makes the human being insusceptible, at least enables him to resist an attack.

The experiment is this, that when plague has broken out in a community each person should be supplied with half an ounce of salt per day for a month and should use it with all food, the greater portion in solution with warning never to drink any water without some salt dissolved in it.

Mr. Gumpel exhorts his readers to place faith in his views. If this simple remedy will prove effective enough, then the heavy financial burden thrown on the Indian Government and upon the various municipalities on account of the plague will disappear and the people will enjoy the immunity from prevalent diseases for which they have been praying.

## Science.

(By a Master of Arts.)

### A NEW PROCESS OF SMELTING ORES.

Captain Hassano has devised a new method of smelting ores. It is done by substituting the heat produced by electricity for that produced by coal. The merit, he claims for it, is economy. A company of five well-known scientific experts spent two days in witnessing his experiments and they have unanimously come to the conclusion that it is industrially practicable. But the success of the process is largely dependent upon abundant water-power at a very low price for the production of electrical energy, the consumption of which is enormous. Further, no adequate proof has yet been produced that the new system will not cost more than the one hitherto in vogue.

### WIRELESS TELEGRAPHY USED IN STEERING TORPEDOES.

It is only a few days ago that it was announced to the scientific world that an English Electrician named C. Vericas had discovered a means for steering torpedoes and other light craft by Marconi's system of wireless telegraphy. Since then the inventor has been furthering his experiments with a view to steer submarine torpedoes in the same way. Sometimes ago an experiment was made in the open sea in the English Channel in which Mr. Vericas was able to manipulate by means of ether waves, the movements of a torpedo in any desired direction while travelling below the surface. The value and possibilities of this invention are incalculable. It can be manipulated so easily, so readily and so variously that it would be impossible for an enemy to locate its direction of travel. Again it is impossible for it to miss its aim, whereas with the aid of the gyroscope the movement of the target nullifies completely the discharge of the torpedo which is consequently lost. It is also much cheaper than ordinary torpedo. This invention has been inspected by several military and naval experts from all countries, who are of opinion that it is possible to control torpedoes in future by means of the wireless telegraphy. The Swedish Government have already commenced the introduction of a similar means of steering torpedoes into the defences of the country.

### "ARGON AND ITS COMPANIONS."

This is the title of a paper read before the Royal Society in November last by Professor William Ramsay F.R.S., LL.D., of University College, London. The discovery of "*Krypton and Neon*" was announced to the

society in 1898. Subsequently a heavier gas was discovered in the air, which was named 'Xenon.' Sometime hence another gas with a spectrum differing from that of 'argon,' but of the same density was found to exist. This was named 'metargon.' In the autumn of 1898, Mr. Baly saw the presence of 'helium' lines in the spectrum of 'neon.'

#### THE BOILING POINT OF LIQUID HYDROGEN.

A lecture was delivered before the Royal Society by Professor Dewar LL.D., F. R. S., of the Royal Institution on the above subject. On a previous occasion, the Professor showed that a platinum resistance thermometer gave for the boiling point of hydrogen— $238^{\circ} 4\text{C}$ . or  $34^{\circ} 6$  absolute. Having had recourse to gas thermometers, the professor made use of the Hydrogen and Helium gas thermometers, found for the boiling point of liquid Hydrogen— $252^{\circ}$  or 21 absolute. And the professor has undertaken to discuss the temperature of solid hydrogen on a future occasion.

#### IMPROVEMENTS IN WIRELESS TELEGRAPHY.

A lecture was delivered by Prof. Braun at the Institution of Physics of the Emperor of William University on the above subject. After giving a short sketch of wireless telegraphy, he proceeded to describe his own system of wireless telegraphy at which he has been working for some months past. Instead of having a spark gap in the virtual wire, this wire is coiled at its lower end and oscillations are set up in it by induction from another coil containing the spark gap in which the oscillatory discharge takes place. This method, claims the lecturer, is much superior to that adopted by Marconi and enables messages to be sent with more certainty and to a greater distance. Experiments on the Marconi system were compared with the results of his own and the results of the former are not so good as those obtained by Prof. Braun. But it is only a few days ago that Prof. Fleming announced to the Liverpool Chamber of Commerce that Marconi had succeeded in transmitting messages at a distance of 200 miles and in both directions and that two or more could be received at the same time and at each station. We have not as yet heard if Prof. Braun has succeeded in avoiding these difficulties in any manner.

#### THE TRUNCATED MAN.

One of the most interesting exhibitions at the recent Paris Exposition was a remarkable person, one of the rare examples of human beings who has been from birth deprived of his arms and legs. Born in France, in a family of some social status, he does not feel the deformity impressed on him by the cruel hand of Fate.

He eats, drinks, digests like any other person; but if left to himself, he will undoubtedly die as it is impossible for him to move his body in order to procure food. He does not suffer from want of occupation as he has different kinds of work to keep him employed. One of the many occupations of this 'armless man' which excite our wonder and sympathy is this. He takes a nail in his mouth, plants it in the wood and drives it in very adroitly; he also threads a needle with his mouth, can take up a glass or metal cup which is given him to drink and empty it without spilling a drop. He seems to be sufficiently intelligent. He is also said to make chairs and tables and other objects by nailing together, if the pieces of wood are placed in position. This is indeed, a wonderful being for exhibition and there are four or five pictures of the man, published in the *American Scientific Review*.

#### A DISTINGUISHED INDIAN SCIENTIST.

Dr. J. C. Bose of the Presidency College, Calcutta, is now engaged in making researches in the Davy-Faraday Research Laboratory owing to the extension of the deputation for sometime longer. We hope to hear shortly of the results of his work at the Laboratory. We are also glad to learn that some of his papers on Electrical Radiation have been published in the *Journal of the Royal Society*. Do we require a better example of an Indian scientist, to create in our minds a taste for scientific research?

#### THERAPEUTIC ACTION OF LIGHT.

Dr. P. Garnault read a paper before the Académie des Sciences on the therapeutic action of light mentioning a number of cases in which this treatment was used with success. His attention, says the *Scientific American*, was first drawn to the subject by the observation of M. Troune in 1893 that a workman afflicted with rheumatism was completely cured after having remained for 48 hours in the vicinity of an intense electric light. It appears that by the local action of light, rheumatism, and even cases of deafness have been cured. An electric lamp of 50 candle power provided with a silvered parabolic reflector was used in these cases.

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*All contributions, books for review, should be addressed to Mr. G. A. NATESAN, Editor, Indian Review, Esplanade Madras.*

*All business communications should be addressed to MESSRS. G. A. NATESAN & Co., Esplanade, Madras.*

*Contributions are solicited on all subjects of general interest, and if accepted and published will be duly paid for.*

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## The Indian Review.

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It is a happy sign of the growing interest which Englishmen at home are evincing in Indian affairs that Sir William Wedderburn should have been able to bring together on a common platform a number of prominent English politicians and retired Anglo-Indian officials with a view to form a Union to investigate the causes of famines in India and the possible means of preventing them. Unfortunately for a long time past, eminent official minds both here and in England have been paralysed by a feeling of "utter helplessness" in regard to the unsatisfactory condition of the Indian ryot. It is useless to fight against the inevitable and it would undoubtedly be folly to waste time and money to pursue the inquiry in regard to the causes of famine and the remedies for it, were all possible methods of prevention tried and found useless. But there is a conviction in the minds of many that such an exhaustive inquiry has not hitherto been made. There is still a great need for inquiry and it need hardly be observed that had it not been for this conviction, leading politicians like Lord Hobhouse, and Mr. Courtney and several retired Anglo-Indian officials who are held to be strong supporters of the Government of India would scarcely have countenanced the formation of the Indian Famine Union. There is no doubt that the authorities have always shown the greatest possible solicitude to mitigate the disastrous effects of famine, and due praise has always been accorded to the diligence and earnestness with which they have afforded relief to the distressed, but the official authorities have been always so preoccupied with their current duties that they have had little or no time for a calm and dispassionate enquiry into the subject. It is well, therefore, that men who have long served in India should come to the aid of the Government. It is a matter for gratification that the Secretary of State for India welcomes such co-operation.

In a letter to the *London Times* the promoters of the Union specify the exact scope of the objects of the Union and the methods proposed to be adopted.

Our special object is to investigate the causes of Indian famines, and to promote all possible means of prevention. Here all possible help is needed to collect facts and mature practical suggestions. And we believe that this help will be welcomed

by the over-worked officials in India whose time is fully occupied by the current duties of administration. There are in this country many persons, retired Officers, Civil and Military Engineers, business men, and Missionaries, who have special experience of India, who sympathise with the Indian people, and have spare time at their disposal. Our object is to utilise this experience, good will, and leisure for organised work, so as to bring practical aid to the Government of India in tracing the causes of these recurring calamities and in devising means of prevention. We are also anxious to obtain help and advice from the leading authorities in economic science, with a view to dealing on sound principles with the difficult problems involved in safeguarding a vast and scattered agricultural population.

The first point is to ascertain in detail the present condition of the Indian cultivator and the origin of difficulties and this can only be done by a special enquiry conducted under the orders of the Government of India. An exact diagnosis of the patient must precede the application of remedies. We therefore propose to begin our work by moving the Secretary of State to grant this special enquiry. We then propose to form Sub-Committees to enquire into and report upon the various suggested remedies—*e. g.*, irrigation, agricultural banks, village industries, reafforestation, migration, grain storage, export duties on grain, technical education, arbitration courts, administrative reforms—already before the public, in order that the Government of India may have the support of an enlightened and organised public opinion in dealing with the problem of famine prevention as distinguished from famine relief.

The enquiry is to be comprehensive and though individual members of the Union might differ in some respects, still we may take it that the enquiry will be productive of beneficial consequences. It may possibly open the eyes of the people and the Government to certain aspects of the famine problem that have not hitherto received adequate attention.

Prof. Ramsay's recent oration in connection with foundation week at  
**The Functions of** University College, London,  
**a University.** will be read with interest

by all those who are interested in the promotion of University Reform in India. A University, he urged, was not a technical school where men learned the arts and qualified themselves for professions. The mere spread and communication of knowledge among the youth of the land is not the highest aim of a University. It was the increase, the advance of knowledge, the searching out of the secrets of nature. And this is not solely or chiefly on account of its utility in promoting the happiness or adding to the resources of man, but for pure love of knowledge. The acquisition, not the utilisation, of knowledge is the chief function of a University. The lower utilitarian view brings, about the deterioration of the professor and his work. No one should be appointed professor who is not himself doing research work, for if that spirit be not in him, how can he instil it into others? Prof. Ramsay condemned

the examination system as responsible for the prevalence of the lower ideal, and doubted the wisdom of the huge expenditure of money on University Extension lectures. He criticised the statement that the true function of a University was to train men and women fit for the manifold requirements of the Empire, remarking that if a University did no more than that and took no share in the advance of research work, it would degenerate into a technical school or coaching establishment.

The papers are commenting on an extraordinary statement made at Magdalen College, Oxford, by the  
**Bishop Weldon** on India. Bishop of Calcutta. Bishop

Weldon is without doubt one of the most learned and ardent divines that India has known, but it has been always a matter of doubt whether in his public utterances he does not allow his anxiety for the spread of Christianity in India to run away with his discretion. In the present instance he is reported to have said that wherever a native was converted to Christianity there was made or won a loyal subject, and a little further on to have added that, if the non-Christian religions of India were to get the upper hand, the lives of Christians would not be worth a long purchase. We would fain believe that such mischievous statements were uttered in the hurry of a public discourse, and proceeded not so much from a deliberate conviction of the heart, as from a tongue that has the gift of speaking well, but not wisely. Should, however, the Metropolitan have meant all that he said, he has proved himself inexcusably ignorant of the previous history of Christianity in this country. From the native rulers of the land as well as from the lower classes among whom the missionary of old worked, the religion of Christ has met with surprisingly little opposition, and not unoften received open countenance and active help. Nor can the Bishop be credited with insight into the real character of Hinduism whether among the cultured or among the ignorant; for to most forms of this all-absorbing religion, unprovoked and bloody persecution of other faiths is a grievous sin against God. Yet more. Such uncharity and readiness to think evil of alien peoples as the sentiments above quoted indicate, are serious disqualifications in any minister of Christ: when they unite with official dignity and vast influence in one whom all India looks upon as the first representative of Christianity, they amount to a stain on the religion of peace and good-will to mankind and constitute a menace to the popularity of the Government, which the Bishop apparently longs to convert into an ally of his militant enthusiasm.

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## PROTECTION FOR INDIA.

**M**OST of those who have taken sides on this question, whether in the European States or in America, have permitted themselves to be guided solely by principles drawn from the working of tariffs in Europe. The result has been the formation in all of these countries of two great schools, the one for protection, the other for free trade. No third school, no Middle Academy has been formed; the experience of Asia, of America, of Australia, has gone for nothing. The attention of writers on this subject has been concentrated exclusively upon Europe, where the working of every principle of government is obscured by the murky history and bewildering influence of the feudal system which sprang from the decadence of Rome.

Let us endeavour to determine the true principles which underlie this difficult subject by striking out in a new direction; by taking a leaf from the history of tariff legislation in those free states of the Far West whose affairs are as yet free from the trammels and perplexities of feudalism.

The influence and working of a tariff, indeed of any tax, in a given country, depends essentially not upon the incident taxed, but upon the *amount* of the tax and the *rapidity of its diffusion*. Assuming that the amount, taken in connection with other taxes, is not so onerous as to encourage persistent evasion or excite widespread discontent, the working of the tax will depend essentially upon the *rapidity of its diffusion*. This is a point to which neither Cobden nor Bastiat, neither Carey nor McKinley, ever seems to have devoted the slightest attention. Yet it is the crux of the whole question. The Free Traders of England ascribe the commercial prosperity of that country to the removal of customs duties; a conclusion entirely without foundation. The same sums of money which British manufacturers and merchants had formerly to pay at the custom-house, they now have to pay at the

excise office. How can so trivial a cause have produced such a stupendous result? What essential difference can it make to the manufacturer or merchant whether he supports the State by dropping his quota into Box T or Box E? The commercial prosperity of England was due to good government and the practical monopoly of coal and iron; and not to any system of taxation. I say *was*, because, as the "Indian Review" has already aptly pointed out, that prosperity is beginning to show signs of retardation. Why? There has been no change in the system of taxation. The manufacturing supremacy of England is being lost because England no longer possesses a monopoly of coal, and iron, vast deposits of these gifts of nature having been discovered elsewhere. Coal means mechanical power; iron means implements, tools, weapons, railways and ships. The nation which possesses these elements of prosperity may play with a tax system, may even fool with one, and yet enjoy prosperity. That, in a nutshell, is the explanation of the growth and retardation of British manufacturing industry.

Contrariwise, the Protectionists of the United States ascribe the commercial prosperity of that country to the imposition of customs duties, a conclusion equally unwarranted. The same sums of money which American manufacturers and merchants had formerly to pay to the excise, in the form of income taxes and other "internal revenues," they now pay at the custom-house. How can the shifting of payments from Box E to Box T have occasioned commercial prosperity? The commercial prosperity of America is due to good government and the discovery of coal, iron and other gifts of nature in favorable localities; and no system of taxation, within the reasonable limits above outlined, could have stopped it. While such prosperity is mostly due to coal and iron, it is also due to some measure to other causes. Among these are a social system which enables every man, however poor or humble, to take part in all national effort and a monetary system of proportions ample

enough to render metayerships, corn-rents and barter, unprofitable. The general result is this: Every individual, every atom of the community (except, as between the Whites and Africans) is mobile. Each atom is free to mingle with, confer with, marry with, or exchange with, any of the other atoms. In consequence of this fluidity of the population, a tax on one thing in America, is practically a tax on all things. It acts like hydrostatic pressure. Taxation, whether customs or excise, diffuses itself so rapidly and evenly that, for example, a heavy tax on nails would, in a few months, possibly in a few weeks, raise the price of butter. Here lies the crux of all tax systems in America or elsewhere. How long will it take for a tax on one commercial incident to diffuse itself upon all incidents? How long will it take for a tax which one man or one class of men has to pay, to diffuse itself so that all other men will share in the payment of it? In America, this diffusion is practically a question of months, and therefore it makes but little difference what tax system is adopted, provided it is not changed too often, nor too suddenly. In England, diffusion is practically a question of years. The choice of a tax system for that country is therefore of greater importance. In India, diffusion is probably a matter of decades. The choice of a tax system for that country is therefore of the highest importance.

The rapid diffusion of taxes in America has greatly lessened, has almost nullified, the influence of the Protective System. Except in the two examples of wool and iron, upon which the duties levied were usually from one to three times the cost price of these commodities abroad, the tariff never succeeded in keeping out any protected article of general consumption, more than a few months. In the case of iron and its manufactures, the protection seldom lasted more than a year. In the single case of wool and its manufactures did the protection last as much as three years. The diffusion of taxes worked in this way. The enhanced cost

of the protected article raised the cost of living; this caused a demand on the part of the workmen for increased wages: and increased wages to his workmen raised the cost to the American manufacturer of producing the domestic article to and above the cost of the foreign article, plus duties and carriage. The moment such cost passed the level, the foreign article began to be again imported and there ended the protection, until a new and higher tariff was enacted. Such is a brief history of all the American tariffs.

Having thus shown, though I fear, far too briefly to be clear or convincing, that, according to American experience, the essential elements of a tax system are the *amount* of taxation and *rapidity of its diffusion*, there remains a passing remark to be made before applying the principle of *tax diffusion in time* from the present condition and wants of British India. The weight of a tax depends upon the service to which the proceeds of the tax are devoted. A very light tax, if expended wastefully or wantonly, is unprofitable to the tax-payer and may prove a very difficult one to be borne: a very heavy tax, if expended wisely may be economical to the tax-payer and cheerfully borne. Without enlarging on this point let us proceed.

The reasons why Protection has failed in America are precisely those which would render it effective in India. There, a tax on the import of commodities would continue to menace the importer for years, perhaps for decades, before it would be paid and become so diffused as to raise the cost of producing similar commodities in India to the level of the imported commodities, plus duties and carriage. This interval would afford the native manufacturer an opportunity to build up and develop his industry free from outside molestation, subject only to competition within. The interval would be long enough to warrant him in borrowing and employing capital upon a large scale. Protection in this case would really protect.

It remains to enquire if protection in India is desirable. Who doubts it? A vast empire, richly endowed by nature, tenanted by several hundred millions of industrious, frugal and peaceful people and containing within it the germs of all the thoughts that have ever elevated man or spurred him to effort, lies prostrate in the dust of a primitive agriculture. Its mountains, its rivers, its minerals, all the sources of mechanical power, lie practically unused. The seas which lave its shores bring it no harvest of aliment; the forests which embower its mountains, bring it the tribute of wealth. The walls of the empire are thrown down, and the foreign trader sits in the citadel, forcing the native every day farther and farther back into the fields; while, behind an always uncertain harvest, stalk the frightful spectres of famine and death. It is to the interest of India, it is to the interest of the British Government, it is to the interest of the British aristocrat, it is to the interest of the British capitalist and fundholder, it is to the interest of the British agriculturist, it is to the interest of every class in England that Indian industry shall be protected and diversified. Even the British manufacturer would be benefitted. Protection to India would render it profitable for him to erect a branch establishment in the Orient. Such would be the immense demands created by a higher level of living, that the branch in time would be very likely to overgrow its parent. This very thing has happened in America. During the brief intervals when new and higher tariff duties upon iron and steel rendered protection effective, British manufacturers, ignorant of its evanescent nature, established branches in Johnstown, Pittsburgh, Chicago, etc. Now these branches transact a greater trade than their parents. Multiply the rate of wages in India by the number of its inhabitants and you have the utmost possible measure of its present consumption, whether of domestic or foreign commodities. Encourage the rate of wages to rise to something near the level of

European wages and you will have the measure of its consumption under protection. Between these two measures there will be ample room for such an expansion of British commerce with India that the present trade will look dwarfed in comparison.

This consideration brings us to a collateral but important phase of the subject, the currency phase, for, without a reform of the currency, without reform in this and perhaps some other matters, protection will not have a fair trial, either as to permanency or beneficial results. In an article which is limited to a few thousand words there will be no room to discuss the "other matters," so that what remains to be said will relate almost entirely to the currency.

One word, though, before we begin. The British manufacturer will probably ask what is to become of the thousands of British operators in Manchester and Birmingham who will be thrown out of employment by the adoption of protection in India? The reply might well be: "What is to become of the millions of British subjects in India who are already without employment and are asked to face an impending famine?" But such a reply is not necessary. There is plenty of employment to be had in England whose wheat-fields are lying fallow and whose bread is being fetched, under an artificial and dangerous system, from the distant valleys of the Mississippi. Let England put a duty on imported cereals, with public provision for her discharged operators for a single season, and next year she will find them on her farms, more prosperous and happy than they ever were at Manchester or Birmingham. The cost of maintaining them for a season will be a flea-bite compared to the sacrifices which the country is now making to keep the peace with her foreign purveyors.

And now to the currency question. Writing in 1892, Mr. Harrison informs us that there was of circulating coin in British India, about 115 crores of rupees. Adding the emissions of the banks, say 80 crores, and the total currency of



India was about 145 crores. Assuming the population at something near 300 millions, this gave about 5 rupees *per capita*, a sum totally inadequate to pay wages and carry on the domestic exchanges, without the aid of barter. Not only this but he informs us that of 375 crores of rupees coined (net coinage) from 1793 to 1891, these 115 crores were all that remained; the balance, or more than two-thirds of the whole, having been lost in the arts, hoarded or exported. To a practical mind it seems that a currency system which encourages, or even permits, the *Measurer of Value mensura publica*—to be thus diminished, as stands in much need of reform. Whether the currency shall consist of gold, silver, nickel, or copper coins, or paper notes, is a matter of detail, into which it is not necessary to enter. The essential point is that there should be enough of it issued to render corn-rents, trucking and barter unprofitable; and that, whatever that sum may prove upon experiment to be, it shall be kept as constant and stable as possible. Stability in the *Measurer of Value* (which measurer is and must necessarily be the whole sum of the currency) is far more important than stability in the yard-stick, the peck, the gallon, or any other measurer. The "Native Official," whose thoughtful essay in a late number of the "Indian Review" has afforded me great interest, declares that a failure of crops causes a wage-famine more than a food-famine. If I understand him aright, this results from crowding the natives into the fields and leaving them no other resource than agriculture. But if the present monetary system of India is not reformed, would not the scarcity of currency and its exposure to exportation produce almost equally bad results, even were her industries diversified by protection? The plain fact, the melancholy fact, is that you have not enough rupees to go around: not enough, to effect the necessary exchanges of civilized life: not enough to pay wages, much less to permit of that rise in wages which protection would stimulate. As to the

prospect of drawing gold from the financial centres of the world, I regard it as too remote for practical consideration.

Currency can be increased in two ways: first, by discouraging its exportation and adding to its sum; second, by the adoption of devices to increase its velocity or rapidity of movement, so that the same sum will effect a greater number of payments in a given time. Railways and telegraphs have this tendency; the employment of *hoondees*, bank-cheques and other substitutes for money have a similar tendency. The land and agricultural banks, advocated by Mr. Nicholson, will also quicken money. Institutions of this character were established in America before the Bank of England was founded; and they powerfully assisted to build up the nascent industries of the North American colonies. In whatever way the currency of India is amplified, it will tend to raise wages, increase the purchasing power of the population, invite and promote industrial enterprises and contribute to support the government. In Great Britain the whole sum of the currency circulates 180 times a year; in the United States, its geographical area being many times greater than that of Great Britain, the velocity of money is but once a week. For India we have no data; but for the sake of comparison let us conjecture it to be about once a month. Any devices which will increase this velocity to once a fortnight would have the same tremendous effect upon prices and industry, as would the addition of another 150 crores to the circulation.

Given a sound and ample currency, by which to equitably and economically effect exchanges, protection for India will at once set it on its feet and impel it along that mighty stream of progress upon which the western world is now embarked; and effective protection for India means protection as against all foreign productions, whether British or other.

I can see no relief for India in Mr. Chamber-

lain's suggestion of a tariff for India, which will admit British and British colonial goods free of duty, while it taxes all others. The result will be that you will deprive yourselves of cheap goods and oblige yourselves to purchase only dear ones. Moreover, a tariff of this sort would invite hostile and retaliatory legislation from every quarter. The British Empire may be vast enough and strong enough to be indifferent to such antagonism; but it is hardly the part of wisdom to invite it. A tariff to protect India against all other countries, Great Britain included, may be impossible of attainment; nevertheless it is the thing to aim at, even if you fall far short of its realization. The agitation of any reform costs time, money and effort; and when these are to be expended, it is the part of practical wisdom to demand full compensation for the outlay.

ALEX. DEL MAR.

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## THE HISTORIANS OF THE REIGN.

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I O adequately appreciate the extent and intrinsic value of England's contribution, during the Victorian era, to what has been justly called the highest department of prose literature, would be once impossible within the limits of this sketch and beyond the powers of the writer. Such an appreciation would require in the critic attempting not only a more than general acquaintance with the entire range of historical literature in the past, but would also necessitate a comparative estimate of the work produced by English with that achieved by foreign writers, notably by those of France and Germany, during the last two-thirds of the nineteenth century. Needless to say no such ambitious task will be attempted here, nor will the present sketch aim at much more than a rapid review of prominent names and a summary

glance at the character of the chief historical works produced during the reign. But while abandoning all idea of a generalised appreciation, comparative or otherwise, of Victorian historical scholarship as a whole, it may be advisable to dwell for a moment on certain prominent features which characterise historical composition in the nineteenth century and which differentiate it from historical literature as produced in former ages.

"History," it has been said, "is of two kinds,—the old artistic type and the new sociological type. The artistic type invented by the Greeks, remained the ideal of history till comparatively recent times. Its aim was perfection of literary form, weight and dignity of language, depth of moral and sagacity of political reflexion. It was habitually careless and indifferent as regards research. But its chief distinction from the new history was a negative one; it had no conception of society as an organism, no suspicion of the depth and variety of the social forces which underlie and originate the visible events which describe it often with admirable power..... Between Thucydides and Gibbon there is no change of the ideal plan on which history should be written, though of course there is every degree of success and failure in striving after its realization."\*

It is of course possible to carry this distinction too far. The admitted fact that Gibbon, though a solitary exception, has not been superseded by subsequent research qualifies it on the one side. On the other, it requires to be emphatically asserted, because it is not seldom implicitly denied, that adequate artistic power is as much a necessary qualification for a great modern historian as it was for his predecessors, and that not so much because external beauty is in itself a desideratum and a charm, as because literary expression of a high order is but the outward mani-

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\* Encyclopaedia Britannica, *art.* History.

festation of intellectual qualities without which history can neither be worthily presented nor, it may be added, justly approached. It is certain, at any rate, that amongst the English historians of the nineteenth century there have been several who, while indefatigable in research and by no means blind to the 'sociological aspect,' have been likewise distinguished by the possession of consummate literary skill, whilst there have been few, if any, in whom absence of the literary quality has been at all a matter of choice.

However, after all qualifications have been made and all dangerously plausible generalisations avoided, it remains true that the modern original worker in the field of history has to face responsibilities of which his fore-runners were not conscious in anything like the same degree. Independent and minute research is imposed on him as a first necessity of his craft; an acceptance of the organic view of society—within limits—is an all but necessary condition. These conditions the historians of the Victorian age have submitted to, of course in varying degrees, and their labours so directed and determined have not only enormously increased the available store of historical knowledge but have presented what was before known in new and fuller lights. The vista has been enlarged, new prospects have been opened out and, perhaps most important of all, the standpoint has been widened. What has been termed the 'historical sense,' and traced to the Romantic movement and the French Revolution—the power to enter into the life of the past divested of modern standards and modern prejudices—has been rendered possible. This historical sense has at once prompted research and has been justified by it. It has dispelled the once prevalent notion that certain ages and aspects of human history might be regarded as negligible quantities, and that institutions alien to modern needs and conceptions of fitness might be dismissed as the product of mere barbarism, ignorance or superstition.

It is, then, demanded of the modern historian more stringently than it was of his predecessors that he should be thorough in his examination and cautious in his acceptance of evidence; that he should assign adequate causes for events, or should at least refrain from putting forth as all-sufficient, causes which are plainly inadequate; lastly it is expected of him—often, it must be admitted, vainly,—that he should approach his task neither in the spirit of the partisan nor in that of superior enlightenment. That few or none have as yet completely realised the three-fold ideal must be confessed; but the ideals are there, are generally recognised, and have been, partially at least, though in varying degrees of approximation, attained.

The new school of history, of which Niebuhr may be said to be the founder, took root in Germany and France before it passed to England. In England, although some notable work was produced before the accession of the Queen, the Victorian era may with moderate accuracy be described as the period in which history began to be written according to the new standard and methods. As was natural, the labours of English historians have been chiefly directed to the annals of their own country. Still, though English historical scholarship has not equalled that of Germany in width of range, it has produced some memorable works in ancient, medieval and modern European history. The works of Thirlwall and Grote in Greek history will at once occur to the mind. There are competent critics who regret the more than partial eclipses which the volumes of the former writer have suffered by reason of the popularity of the latter. The oft-repeated taunt that Grote's book is a party pamphlet in twelve volumes has not lost point in the same degree as it has lost piquancy. Grote's uncompromising championship of democracy, not to say demagoguery, has been far from endorsed by later workers in his own or other historical fields; but, despite the radical bias, Grote's

*History of Greece* remains, and will probably long continue to remain, a standard, if not the standard, work on the period of which it treats. Other English contributions to ancient Greek history must be passed over by the bare mention of the names of Evelyn Abbott, Mahaffy and Freeman, the last an historical scholar of almost encyclopedic range.

Ancient Roman history, although in that field nothing so monumental as Grote's *Greece* has been produced, has not been left uncultivated by English writers. Arnold's *History of Rome* remains a fragment, the author dying when the work had not advanced beyond the Second Punic War. Arnold's merit as a writer of history may be gathered from the tribute of the eminent German historian, Ihne, who declared that had the English writer been enabled to complete the task he had begun, his own book would lack justification.

The respectful attitude of the same scholar towards Froude's *Cæsar* warrants me in including that brilliant work amongst serious contributions by English writers to Roman history. A historian who covers, though far more voluminously, much the same ground as Froude, but, unlike Froude, is assuredly not 'damned in a fair' style, is George Long. Long's *Decline of the Roman Republic* is a work of great learning and research. To read Long, as has been justly said, is almost equivalent to reading the original authorities; but the book is utterly amorphous; it is pre-eminently for students, and the general reader may be warned off.

Dean Merivale's *History of the Romans under the Empire* deserves a fuller notice than it can be accorded here. It must certainly take rank amongst the most important historical literature of the reign.

On considerable tracts of Roman history no standard English work exists and the English reader is thrown back on books of a more popular character, or—which is indeed no hardship—on translations of the German historians, Mommsen and Ihne.

The great 'bridge between ancient and modern European history' is, to our glory, of English

construction, but of eighteenth century workmanship. The nineteenth century has produced no Gibbon, but it may boast of a great ecclesiastical historian in Dean Milman, the author, among other works, of the *History of Latin Christianity*. A period of history especially interesting to Teutonic peoples has been nobly treated by Dr. Hodgkin in his *Italy and her Invaders*.

Hallam's *History of the Middle Ages* was originally published twenty years before the accession of the Queen, but as it did not assume its present shape until 1848 it may be said to belong to the Victorian era. That part of it which treats of English History has been superseded by later historians especially by Bishop Stubbs, but the work as a whole remains indispensable for English students, if it can scarcely satisfy the taste of those—and there are still some such—who read history for pleasure. Hallam's *Constitutional History*, still a standard work, lies outside our period.

A melancholy interest is attached to the next English work on European History which calls for notice, Creighton's *History of the Papacy during the period of the Reformation*. It seems probable that the late Bishop of London had definitely laid aside his historical labours when he took up, certainly neither from ambition nor love of ease, the work of an ecclesiastic, but the earlier task was not abandoned until something permanently valuable had been achieved. The *History of the Papacy* possesses not a few of those admirable qualities which, to judge from the consensus of competent opinion, distinguished its author's life and personality. It is marked not only by profound learning but by a breadth of view and a philosophic impartiality which in the treatment of so burning a subject, would at an earlier period have been almost impossible for a lay writer, much more for a churchman. If the *History of the Papacy* be not a great book, it possesses some of the rarest qualities of greatness.

Of modern English works dealing with foreign history during the sixteenth and seventeenth centuries, there are few that can be touched on here.

Motley and Prescott were not subjects of the Queen, Robertson and Coxe belonged to earlier times. Sir Arthur Helps' *Spanish Conquests* may however be mentioned. It is to be regretted that Froude was unable to carry out his original design of writing the life of Charles V. He has left us instead a few essays and two volumes of brilliant lectures on Erasmus and the Council of Trent.

Passing to the eighteenth century we are confronted by two works which, whether regarded as history or literature, triumphantly challenge the title of great—Carlyle's *French Revolution* and the *Life of Frederick II of Prussia*. Of the value of these masterpieces it is impossible, and it is to be hoped superfluous, in this place to speak. The latter work was characterised by so competent and so exacting a judge as Bishop Stubbs as the one great original contribution of English scholarship in recent times to foreign history. Other English works dealing with continental history during this and the following period can only be named. Stanhope's *War of Spanish Succession*, Alison's *History of the France Revolution and History of Europe from 1815*; Seeley's *Life and Times of Stein*; Napier's *Peninsular War* and Kinglake's *Crimean War*.

This seems as fitting a place as another briefly to notice a remarkable work in general history which, greatly attempting and marked by many striking qualities, can scarcely be pronounced other than a magnificent failure. It is true that Buckle was cut off before he had finished so much as that initial portion of his *History of Civilization in England* which was merely to serve as introduction to the whole, but there are signs towards the latter part of the fragmentary introduction that the author himself had begun to realise that the task he had attempted was, even within his own arbitrary limits, beyond his own or any other man's power; whilst it is certain that the science of history as projected by Buckle, and the revolution in historical method which it was his hope to inaugurate, are now further off than ever. Half a century has

passed since Buckle's book saw the light, but historians still continue even more indefatigably than before to accumulate that very class of material which Buckle would have thrown overboard as useless lumber. The sweeping generalisations which Buckle believed it the philosophic historian's business to establish, are more and more distrusted; the biographical aspect of history which Buckle disregarded, has assuredly lost none of its significance; whilst Buckle's contention that the purely ethical element is a negligible quantity in national progress, so far from having been generally accepted, is implicitly or explicitly denied in almost every page of later historical literature.

We have little space left in which to summarise the works of the reign which have been devoted to the history of England itself. Roughly speaking, that history has, during the period in question, been re-written from beginning to end, from various aspects and with a wealth of detail hitherto undreamed of. There are still, it is true, gaps to be filled up. The reign of Charles II is one. For that reign the most trustworthy modern authority is the great German historian, Ranke; but Ranke's plan precluded a full treatment of the life and progress of the nation, such as the history of Gardiner supplies us with for the first sixty years of the seventeenth century and the history of Macaulay for the last fifteen. Curiously enough, the last years of Elizabeth have also, as yet, found no worthy historian.

For the earlier periods of English history, to mention only the better-known names, we have Palgrave's *History of England and Normandy*, Freeman's *Norman Conquest and History of William II*, Stubbs' *Constitutional History* and the *Conquest and Making of England* by John Richard Green, a writer known to every one by his deservedly popular *History of the English People*. On the great value of the works of Stubbs and Freeman it would be impertinent and unnecessary to dwell. They have no competitors, nor are likely to have for long to come, in the special

periods of which they treat. We have no work dealing with political history from the Angevin period to that of the Tudor of anything like the importance of the *Norman Conquest*. Of course Stubbs treats the whole period from his special point of view; but Miss Norgate's *Angevin Kings*, Longman's *Edward III*, Wylie's *Henry IV*, Gairdner's edition of the *Paston Letters* and his *History of Richard III*. are authorities which the student cannot afford to neglect.

The chief works of the reign which treat of the history of England during the sixteenth century are Brewer's *History of the Reign of Henry VIII* (originally *Prefaces to State Papers*) and Froude's *History of England from the fall of Wolsey to the defeat of the Spanish Armada*. To Dr. Brewer's learning and his services to historical scholarship an unanimous tribute has been paid. The late Professor Froude has fared very differently. Bitterly assailed at first by an eminent master of his own craft he has been ever since a mark for the slings and arrows of lesser writers, and there is now no paragraph writer, however contemptible, to whom Froude is not fair game and who need scruple to lift up his heel against him. And yet Mr. Froude is among the four or five great masters of prose in the century. He possesses moreover the rarest quality of an historian, the power to make the dry bones of the past live, in a higher degree than any other historical writer of his time with the solitary exception of Carlyle; his greatest work was largely based upon manuscripts examined for the first time by the historian himself; his outlook upon life was no narrow one; he was no partisan in the sense that Macaulay was, and his judgment was not warped by sectarian prejudices; he could do justice to the moral virtues of personages with whose intellectual position he had no sympathy, and he could and did ruthlessly expose the weak and base points of those who championed causes which he believed to be just. The charge of habitual inaccuracy and misstatement so repeatedly brought against him is, I believe, if not altogether exaggerated, at best

provable chiefly in the case of trifling details which do not in any real sense affect the general truth of the narrative or weaken the general force of the argument. But Froude has seldom been tried fairly. He belonged to no party, political or religious, and he consequently pleased none. He neither would nor could pronounce several modern shibboleths. The brilliance and vigour with which he expressed unpopular views and rode roughshod over popular sentiments gave pain in this quarter and aroused angry resentment in that, so that those qualified to judge have never accorded to Froude the patient hearing which he might have met with had his own attitude been more conciliatory and, it must be added, had he been a less dangerous opponent. As for unqualified opinion, it has gone on its usual plan, and believing on the principle that what is said three times must be true, now seems to acquiesce in the estimate recently expressed for the benefit of school-boys by a minor writer of history, that Froude was a fine writer but a poor historian. The estimate is on almost every ground as shallow as it is impertinent. The whirligig of time will no doubt bring its revenges, but it requires no prophetic sagacity to foresee that it will leave Froude not far removed from the company of the immortals when many a work now ranked higher than his has been long superseded or forgotten.

Of historical works on English history during the seventeenth century, I shall mention but three; two of them by writers of acknowledged and splendid genius, though of widely different character, the third if not bearing the hall-mark of genius, at least characterised in the highest degree by learning and research, by a breadth of sympathy as rare, even in these days, as it is praiseworthy, and by an impartiality which owes nothing to sceptical indifference. I refer of course to Carlyle's *Letters and Speeches of Oliver Cromwell*, to Macaulay's *History of England* and to Dr. Gardiner's monumental work, or works, on English history during the first half of the seventeenth century. Carlyle's estimate of Crom-

well has not of course been accepted at all points by later scholars, but it is not too much to say that, apart from all excellences which belong to the work regarded as literature, it has lifted once for all the memory of the great Protector and his work for England from the gulf of scorn and ignominy to which the prejudices of Whig and Tory alike had condemned it. Seldom has a prophecy been more curiously falsified than that of Sir Walter Scott when he foretold that a collection of the Protector's speeches would make the most nonsensical book in the world. Of Lord Macaulay's magnificent history it will be enough to say that, while its true limitations are probably better recognised than before, it has outlived detraction and that flippant criticism of it, never pardonable, is now not even fashionable. The third work mentioned is of later date, and though it has reached its seventeenth volume is not yet completed. Dr. Gardiner is universally acknowledged to be the greatest living authority on English history during the earlier half of the seventeenth century. That field he holds without possible competitor; but great as is his learning, his sober enthusiasm, gentle tolerance and wide sympathy are rarer and more admirable still. To the young student of history anxious to acquire not knowledge only but something of that breadth of view and sobriety of judgment with which all periods of history should, if possible, be approached, but especially those times the sound of whose controversies still echoes, no better advice might perhaps be given than that he should give days and nights to the study of Gardiner.

The historical writings which deal with eighteenth century England must be dismissed with the mere mention of the laborious but undistinguished work of Stanhope and the far more literary and philosophic history of Lecky. A very considerable part of this fine work is devoted to the history of Ireland and has indeed been more conveniently published as a separate work. Lecky's *History of Ireland in the Eighteenth Century*, written as it is from the standpoint of academic liberalism,

may serve as a corrective to Froude's *English in Ireland*, a trenchant but painful picture of sordidness, mismanagement and fatuity. Other works on general history which might find a place in this sketch would undoubtedly include Spencer Walpole's *History of England from 1815 to 1858*, Fyffe's *Modern Europe*, Finlay's *History of Greece* (from the Roman Conquest to modern times.) Skene's *History of Scotland* (early times) Burton's general history of the same country, and the *History of British India* begun by the late Sir W. W. Hunter. Works dealing with special aspects of history or with particular individuals who have helped to make history, it has been impossible even to refer to, but an exception must be made in favor of economic history by reason of its peculiar importance and its comparatively recent origin. In this department we may mention Professor Thorold Rogers' *History of Agriculture and Prices* and Professor Cunningham's *Growth of English Industry & Commerce*. Nor while the architects of historical literature have been named, ought we to omit some reference, however inadequate, to the labour of those who have worked the quarry and fashioned the separate stones, providing material for histories that have been and are yet to be written,—the editors of the state papers and other public records, of old chronicles and of family and other private papers which throw light on general history. Nor again should those who have laboured in fields bordering on that of history be passed over without mention: the Egyptologist and Assyriologist, who have done so much to throw light on past civilisations with which history proper can never deal; the ethnologists and anthropologists who, concerned with pre-historic and savage man, have busied themselves with the hole of the pit whence we were digged. Neither, though the subject of this paper is the historians rather than the historical scholarship of the reign, would it be right to ignore the useful labours of those who, especially during the last quarter of the past century, have done so much to popularise and diffuse

historical knowledge; the writers of those excellent manuals dealing with all periods of history, and of the many series of compact historical biographies and other historical sketches, admirably adapted for the beginner or for those who have neither time nor opportunity for more exhaustive reading. These handy volumes are in general by no means merely compilations, but are in most cases the work of writers equipped with special and not seldom with unrivalled qualifications for the task. Regrets are sometimes heard that powers and opportunities which might have been devoted to more enduring work should be wasted on school-books and popular resumé's, but whatever justice there may be in the complaint, the gain of the educationist and the general reader is clear.

This rapid and all too inadequate survey of the historical writings of the reign of Victoria may be fittingly closed with the name of a work, the importance of which it is impossible to overestimate and which, slowly built up by the patient and self-sacrificing toil of many skilled labourers, attained completion with its sixty-seventh volume in the last year of the century—the great Dictionary of National Biography.

MARK HUNTER.

#### NATURE WORSHIP.

**F**ROM the records of the early dawn of history we are able to glean here and there evidences of the influence exerted by nature on the mind of man. These increase from century to century till, in our day, we find that some of our writers—the revealers of the national mind—fill their pages with as much picturing of nature, as with incident, pure and simple. What nature was in the primeval days to the strong and simple savage, it is not difficult to conjecture, for we have the material of our own experiences to draw inferences from. The misty dawns and green forest recesses would inspire quiet pleasure, the red sunsets, the great mountains would fill the fresh mind with ad-

miration, the hurricane, the storm and the dark solitudes would create fear and other aspects of nature would give rise to more complex sensations, all of which familiarity would tend to modify in most minds. Man lived in an enclosing atmosphere of wonder. To minds like Wordsworth's which in every age have had this faculty of beholding nature ever fresh and unveiled, nature will ever be a brooding influence overwhelming, at sometimes expanding or exhilarating, at others a frowning power or a strong genial mother.

Coming up from the earliest ages throughout Hebrew records, we find scattered references to the wonders and power of nature, denoting admiration of these as manifestations of the Divine. Instances of this kind are frequently found in the Psalms of the Hebrew poet-king—David. Here nature's works are an exponent of God's greatness. Thus we have the following:—The heavens declare the glory of God, and the earth sheweth His handiwork; who coverest Thyself with light as with a garment; who stretchest out the heavens like a curtain. He giveth snow like wool. He scattereth the hoarfrost like ashes. He casteth forth His ice like morsels; who can stand before His cold?

This interweaving of poetic and religious thought was so common, that it came to form the most prominent feature of worship amongst the Greeks and Romans, and of the mythology of these races. Previous to this the Hebrew, though the place and practice of his pure theistic worship had been clearly laid down, often erred, and rebelliously broke these regulations. One of the reproaches brought against the idolatrous leanings of this race was that the backsliding Hebrews worshipped in groves, and on high hills, like their Heathen neighbours, and made their offerings to the moon and other celestial bodies. Their pure Theism becoming thus corrupted into Pantheism or an impure nature-worship, the race became degraded by the development of sensuous and sensual tendencies. How much this cult was in vogue among the Egyptians the Babylonians, the Phenicians, and other highly civi-



lised races of that age, is well-known to those who have studied the growth of religious thought. Each luminary was a deity of greater or lesser power. A race of worshippers adopted its special protective god or goddess, and practised the rites which seemed to appertain to the character of the power it worshipped. Thus sprung up various religious cults, some of which were followed by very small bodies. It would be interesting to know how the conception of the various deities arose in the minds of their worshippers, and how they were given so much of form and substance and attribute, as to stand out distinct like living entities. We recognise, of course, that human attributes were singled out as the basis of the character in each case, and these were bodied forth, and vivified by the imagination, but the gradual working and the details of these psychic processes leave something to be learnt, and would be an interesting study. The thunder, the lightning and storm, the shaking of the earth, the darkening of the sky, suggest and give form to the conception of Zeus or Jupiter the All-Powerful, the Father of Gods and Men. The wide stretching ocean, and its numberless tributaries from the smallest brook to the deepest river, appear to belong to another ruler, and that is Neptune, the god of the waters. Forests and groves have their tutelary deities, whose aspect is that of woodlanders, and whose delight is naturally in things of the field and forest, while the Water-Gods love to dwell under the glassy, cool translucent wave. And so on with the various Gods of earth and sky and sea. Each is a distinct personality, with a habitat of its own, and this Pantheon of Gods had its origin in the union of personal experience and observation of nature.

Nature worship may be looked upon as an artless form of adoration, but from it we arrive at Pantheism into which enters thought and method sufficient to specialise it into a system of religion. Of Pantheism it may be said, that it considers all material phenomena as merely aspects, modifications, or parts of one eternal self-existent Being,

all things, whether material objects or particular minds as derived from a single infinite substance. It is believed that Pantheism, though it belongs to the dim dawn of history, is only an offshoot or perhaps, a further development of a still more ancient form of religious thought, namely Polytheism. In ancient religions there were many gods, deified powers of nature, all having their origin in common, and being never entirely distinct or independent. The most ancient form of Aryan religion was polytheistic, being the worship of various nature deities. We might here remark that the highest forms of nature worship are found in the Vedic, Egyptian and Babylonian--Assyrian systems. There are those, again, who maintain that the root or primeval conception was that of Monotheism. The multiplication of deities, or the deification of natural forms, was the result of limited spiritual apprehension and boundless admiration and fear of a sensuous type. But all this is largely conjecture, and in the nature of things, there is not evidence enough either for or against it. Pantheism itself is so marvellously varied, that systems called pantheistic are rarely purely so, being more monotheistic than pantheistic.

Pantheism may be said to have two aspects--a spiritual and material. The former makes the Universe one with God, and the latter regards God as one with the Universe. This second view may with reason be termed atheistic, but the first has often been the genuine expression of deep religious feeling and thought. According to students of Hindu philosophy, pantheism is taught especially in the Upanishads, the Vedanta and Yoga systems, and we find the same mixture of poetry and religion in the phraseology of Hindu pantheism that makes it akin to the more logical and later developed Western forms. According to the Hindu philosopher, man comes into a world of illusions, and his ideal of life should be deliverance from these. This can only be achieved by contemplation of the Infinite Spirit, who is all in all. Hindu pantheism is thus purely spiritual in its character,

matter and finite mind are both alike absorbed in the Absolute.

The Pantheism of the Greeks, although its manner of origin was probably the same as that of India, is more varied in form and more logical in its method of exposition. One of the earliest Greek philosophers--Anaximander the Milesian--taught that all the phenomena of the Universe proceed from, and return to, the Infinite. This philosophy is materialistic pantheism. Xenophon was the first philosopher who taught the spiritual or higher Pantheism. He did not believe in creation and affirmed that it was an impossibility. He taught the existence of an Eternal, Infinite One or All of which or whom all visible phenomena or existences are mere illusions. But he gave more definiteness and colour to his system by pronouncing that Eternal One to be God. Very frequently, however, it is impossible to see the distinction between actual atheism, and the pantheism of the early Greek thinkers. There were two schools of Greek philosophy which were pervaded by pantheistic thought, the Eleatic and the Ionic and it may be said of these, that the former taught the spiritual pantheism, affirming that God was the container of all, whilst the latter taught that God was contained in all--a thoroughly materialistic conception, tending to absorb God in the world, and differing from atheism rather in name than in fact.

Pantheistic philosophy was at its best among the Neo-Platonists--a sect of Greek philosophers at Alexandria. The pantheism of these thinkers was most spiritual and most decided. The waves of Western and Eastern thought met in this great city, and we see the influence of this circumstance on such old thinkers as Plotinus and Proclus in their theories of emanation and ecstasy, which have decidedly an Eastern cast.

During the middle ages, the influence of the Church was all powerful, whilst learning and deep religious thought were almost entirely to be found amongst the sons of the Church, whether in the laity or priesthood. The doctrine of the Trinity--

the strongest belief in the church was incompatible with any pantheistic views. Consequently, speculation on such points had scarcely any room, and was but little heard of, at least in public. It is not improbable that there were minds bold and curious enough to enquire into the views of early heathen scholars, whose literature had come down to them. But the only philosopher who appears to have taught, or even speculated on such views was John Scotus Erigena, and his teachings are probably the results of a study of the Neo-Platonist philosophy. He at the same time, strange to say, held to his faith, which he evidently did not consider incompatible with this old-world belief. Perhaps, one explanation of this mental attitude may lie in the fact, that there are in the Bible expressions of deep spiritual truth such as "He that dwelleth in love, dwelleth in God" which have somewhat of a pantheistic cast. Erigena, from the age in which he lived, may be regarded as a link, or a transitional type, and as such his mind reflects the setting Eastern philosophy, and shows foreshadowing of coming Western thought as represented by Schelling and Hegel. In the 12th and 13th centuries he found followers in *amabric de chartres* (a disciple also of Abelard), and his pupil David de Dinant. These were condemned as heretics, for having introduced Erigena's teachings, though in a modified form, into theology.

We come now to modern pantheism which may be said to have its first exponent in Giordano Bruno, who was burned at Rome for his opinions, in 1600. He taught the philosophy of two schools--the Eleatic and the Neo-Platonist--but with him the perception of an absolutely perfect, supreme spirit was much clearer, and was more definitely taught than by the old philosophers. He held that there was one infinite Mind permeating all the Universe, which is but an emanation of this mind having no separate existence or creation. This Great Mind infills, with varying degrees of consciousness, all things, thus giving rise to distinctions in their status, but all alike have no intelligence of

their own, and are as a passing shadow, the only existent one being, God, of whom, in whom, and through whom all things are.

After Giordano Bruno in point of time comes Spinoza, though in the matter of intellectual greatness, he takes the first place among the pantheistic thinkers of all ages. He aimed at reducing the inherent vagueness of pantheistic thought into a systematised philosophy. He built up this system as Euclid did his Geometry in a strictly logical fashion. In doing this, he forged a remarkable chain of argument, which however fails to bind conviction. The subtlety and sureness of his reasoning are admirable, but perhaps men instinctively feel that the things which are spiritual in their nature, do not admit of being put into logical moulds, or of being established by mathematical conclusions. Whatever the causes may be, no one has heard of disciples of Spinoza, holding pantheism for their faith. Spinoza, however, exercised great influence on the development of metaphysical speculation in Germany, where Kant excepted, the three greatest modern philosophers—Fichte, Schelling and Hegel have all taught purely pantheistic philosophies. In no other country have there arisen such eminent professors of these views. Neither England, France nor America has given the world a single great pantheistic thinker. However, though we do not find that at present these views are concentrated and crystallised in any one mind, we assuredly find them diffused through many minds. This can be seen from the poetry, criticism, theology, and speculation of the day.


In reviewing the history of nature worship and pantheism, we cannot help but recognize that they only flourished in the days of the childhood of our race, and wherever they still linger, they are to be found in primitive associations, or if elsewhere, then they are part of the blend of ancestral belief and thought. The open wonder of the fresh mind in the face of nature, its comparison of growing experiences, its formulating of a system of belief from the mass of experiences, may serve to repre-

sent the stages of evolution of pantheism. All that follows is progressive elaboration. The race of pantheistic thinkers is probably extinct in this age. Pantheism as a religion is essentially different from pantheism as a speculative system. That feeling of awe and adoration, which gave birth to pantheism cannot be said to be the basis of later pantheistic reasonings, in which the matter, but not the religious spirit is found as an actual religion. Pantheism could not survive the early stages of the race. It only satisfies the instinct for worship, but leaves the individual with a vaguely defined unresponsive Divinity, all approaches to whom are baffled, or with various anthropomorphic divinities. Other religions with a higher and more sympathetic conception of God displaced this form, which may be regarded as one of the stages of religious thought. It fulfilled its purpose, and now remains as a study, interesting and beautiful as Pygmalion's statue to which, however, neither love nor faith can give life, for these have passed away like some fair dream. There comes the vision of those primeval days when faith showed the Gods dwelling on earth, or when winds, and stars, and seas held a mystic life which awed and thrilled men. The childhood of the race, and all that pertained to it have passed away, but with us in the passage from childhood to manhood, have comethese "trailing clouds of glory"—the gorgeous and mystic forms of pantheistic thought. And indeed each one who is Nature's priest, and beholds the 'vision splendid' may declare with the great poet of Nature:—

"And I have felt  
A presence that disturbs me with the joy  
Of elevated thoughts; a sense sublime  
Of something far more deeply interfused,  
Whose dwelling is the light of setting suns,  
And the round ocean and the living air,  
And the blue sky, and in the mind of man,  
A motion and a spirit, that impels  
All thinking things, all objects of all thought  
And rolls through all things. Therefore am I still,  
A lover of the meadows and the woods,  
And mountains."

MATILDA HUNT.

## PRISONERS OF WAR.

OW that a large number of Boer prisoners have been sent to India and Ceylon, a brief sketch of the law relating to prisoners of war may not be without some general interest.

First, who are liable to be taken as prisoners of war? In former times, the population of a country, unarmed as well as armed, was at the mercy of its enemies, and it was considered to be within the strict rights of a belligerent to deal with their life, liberty and property as he liked. The northern invaders of Italy are described as persons 'who seemed to love blood for its own sake, who, not content with subjugating, were impatient to destroy, who found a fiendish pleasure in razing magnificent cities, cutting the throats of enemies who cried for quarter, or suffocating an unarmed population by thousands in the caverns to which it had fled for safety', and this description correctly represented the legal rights of belligerents as conceived at that time, although they were considerably softened in practice. But it is now well settled that the non-combatant population, so long as they do not mix themselves up in the war, are immune from any form of violence from the enemy. And it is also equally firmly established that the right to wound and kill even armed enemies continues only so long as they are able and willing to continue their resistance, but that if they are disabled or are willing to surrender, their lives cannot be taken and they can only be detained as prisoners of war. If non-combatants mix themselves up in the war (except in self-defence), they not only lose the immunity which they possess, but forfeit the privilege which the combatant classes can claim, namely, of quarter. If, for instance—a non-commissioned merchant vessel should initiate an attack upon the enemy, its crews cannot claim belligerent privileges, but can be put to death even upon offering to surrender. Nor have deserters and spies, even though they belong to the enemy's regular army, any claim to be treated as prisoners of war.

Besides combatants, and non-combatants taking part in the war, it is permissible to capture as prisoners persons whose detention is likely to put some stress upon the enemy on account of their position, or their usefulness in relation to the war, such as the sovereign and members of his family, the ministers and high officers, and the ambassadors accredited by the state to foreign governments. Officers engaged in the auxiliary departments of the army and present with it on the field are liable to be captured along with combatants. Surgeons and chaplains attached to an army, are likewise, according to the better opinion, and apart from the Convention of Geneva, liable to seizure: but that Convention now provides that they ought to be regarded as neutrals. Sailors on board, merchantmen are also liable to be taken as prisoners, on the ground that they are fit for immediate use on board ships of war.

The legal position of prisoners of war in the country of their enemy appears to me to be an anomalous one. It is different on the one hand from that of enemy subjects voluntarily resident under the protection and license of the Crown, who owe their allegiance to it during their residence, and on the other, from that of members of an invading army, inasmuch as prisoners of war are confined and controlled by the Crown which has also taken them into its protection, having deprived them of the liberty necessary to protect themselves. It would appear to bear some resemblance to the position of the population of a country which is in the military occupation of the enemy. Prisoners of war would be governed by martial law, in the strict sense of the word, in their relations with the State and its officers. Any acts done to them by the State or under its express or implied authority could not be called in question in any tribunal administering municipal law. They would be acts of State or acts of War, and so beyond the cognizance of that law. Not only acts originally done under the authority of the Government but

also those which it subsequently ratifies or chooses to take out of the cognizance of a municipal tribunal, fall within that category. Again, no act done by them with the object of effecting their escape, or which may be regarded as done in furtherance of or in connection with the war, is justiciable in the ordinary courts of law. Such an act is an act of war and so beyond the province of municipal law. In *Reg. v Sattler* (D. and B. 539, 27 L. J. M. C. 50) Lord Campbell C. J. during the argument of the case said: "If a prisoner of war who had not given his parole, killed a sentinel in trying to escape, it would not be murder." In *Attorney-General for Hong Kong v Kwok-a-singh* L. R., 5 P. C., 180, where a number of Chinese coolies were charged with the murder of the captain and the crew of the ship on board which they were making a voyage, and the defence was that the ship was a slave ship and that the accused killed the captain and the crew in order to obtain their liberty, it seems to have been assumed that the accused would be entitled to an acquittal if they made out their case. The judgment against them proceeded on the ground that they failed to make out the facts alleged by them. Sections 128, 129 and 130 of the Indian Penal Code in the chapter relating to offences against the State provide for the punishment of those who allow or assist prisoners of war to escape. Section 128 enacts "Whoever, being a public servant and having the custody of any State prisoner or prisoner of war, voluntarily allows such prisoner to escape from any such place in which he is confined, shall be punished with transportation for life or imprisonment extending up to ten years, and fine." Section 129 provides simple imprisonment for three years and fine for negligently allowing such a prisoner to escape. Section 130 lays a duty on all and not merely on public servants and provides:—"Whoever knowingly aids, or assists, any State prisoner or prisoner of war, in escaping from lawful custody, or rescues or attempts to rescue, any such prisoner, or harbours or conceals any such prisoner

who has escaped from lawful custody, or offers or attempts to offer any resistance to the recapture of such prisoner, shall be punished with transportation for life or with imprisonment up to ten years and shall also be liable to fine. *Explanation*:—A State prisoner, or prisoner of war, who is permitted to be at large on his parole within certain limits in British India, is said to escape from lawful custody, if he goes beyond the limits within which he is allowed to be at large." It is noticeable that no punishment is provided by the Code for the prisoner himself who escapes and it would seem that the omission was advised. It may indeed be said that Section 225 B which provides that whoever, in any case not provided for in Section 224 or Section 225, or in any other law for the time being in force, intentionally offers any resistance or obstruction to his lawful apprehension or escapes or attempts to escape from any custody in which he is lawfully detained, shall be punished etc., is broad enough to cover this case. But though the words are wide enough, it seems to me to be opposed to the context and contrary to the accepted rules of construction to hold that the case is included in the section. It should also be borne in mind that this section was added by Act X of 1886 and finds its place in the chapter relating to offences against public justice. On the other hand, acts done by the prisoners which have no manner of connection with the war are justiciable by the municipal law. If, for example, they run into debt or commit a common murder, they may be sued or prosecuted. Similarly acts which affect them are justiciable, so long as they do not come within the category of Acts of State as already explained. Though it is a rule that alien enemies cannot sue, I apprehend that prisoners of war can do so, since they reside in the country with the sanction, and under the protection, of the government and the decided cases hold that alien enemies resident in the country with the consent, express or implied, of the Government can sue.

Though a belligerent can thus deal arbitrarily with his prisoners uncontrolled by any rules of municipal law, the comity of nations has prescribed certain amenities which ought to be shown to them. These amenities are the result of two considerations which are at work. On the one hand, a State has a paramount right to take measures for its own safety and the safe custody of its prisoners. On the other hand, they are entitled to every indulgence consistent with those objects, inasmuch as they are not guilty of any crime and they have been taken while doing one of the noblest duties of a citizen.

The old barbarous practice of selling them as slaves, referred to by Othello, "Of being taken by the insolent foe, and sold to slavery and my redemption thence," has happily long since been abrogated. Neither can they be kept in common gaols or sent to the galleys. They should be placed in a fortress, barrack or camp where they can enjoy a qualified measure of liberty. They should be fed and clothed at the expense of the State in whose power they are. They may be employed on works unconnected with the war and suitable to their respective positions in life. They may be also permitted to work for hire on their own account. The pay they receive, deducting the cost of maintenance, will go towards ameliorating their position or will be placed to their credit at the time of their release. The tenderness shown to them goes so far that some writers hold that they could be compelled to work for the Government only in default of work remunerative to themselves, and it is usual to grant them money allowances varying with their rank. At the same time it is recognized that the Government can make rules for their safe custody and to maintain discipline among them, and breaches of these can be summarily tried and punished by courts-martial. A prisoner attempting to escape may be shot at and killed during the flight, but, if retaken, cannot be put to death but may be subjected to stricter imprisonment or surveillance or to disciplinary

punishment. The reason is that, while on his part, surrender does not imply a promise not to escape, a State is entitled to take all measures necessary to retain him in safe custody. Similarly, where prisoners of war suddenly rise up in arms, the State has, I apprehend, the power of dealing with them by courts-martial and punishing them severely, although they may not be guilty of any crime in so rising. In this respect they appear to bear a close analogy to the inhabitants of an occupied State whose right to rise up in arms on behalf of their legitimate sovereign is recognized by the law of nations, but who nevertheless are subject to the summary punishment of death at the hands of the enemy if they do so. Questions have been raised in Parliament whether it is permissible to fence with barbed wire the camp in which the prisoners are immured, or whether it is in accordance with usage to place a censorship on their correspondence and the news supplied to them. These and other like questions which may spring up, must be answered by reference to the principle I have already stated—namely, that they are entitled to every indulgence consistent with the safety of the State and their own safe custody. And although the State itself is the fittest judge of what is necessary for those objects, yet its decision should be a reasonable one and not a perverse one. And the modern growth of tender feeling towards prisoners of war has a tendency to place restrictions against them within steadily narrowing limits.

Prisoners of war obtain their liberty by dismissal on parole, by ransom, or by exchange. They are said to be paroled when they pledge their parole or word of honour to observe certain conditions—*e.g.*, not to go beyond a certain district, or not to serve the enemy, during a specified period or until the conclusion of the war, and, thereupon obtain their liberty. The object of these conditions is to make them as harmless in relation to the war as if they had been retained as prisoners, and a captor cannot impose conditions which go

beyond that object. He cannot ask for example, that they shall help him in the war, but he can demand that they shall not serve his enemy at all. Again, the captor cannot make a condition ensuring beyond the termination of the current war. Even if the parole is for a specified period, it is discharged on the conclusion of peace before that time, and even if a fresh war breaks out between the same parties during the same period, the prisoner enters upon the second war freed from the obligation. Illegal conditions are null and void and the released prisoner enjoys his liberty unfettered by the same. A prisoner violating the conditions on which he is set free is subject to the punishment of death if he falls into the hands of the enemy during the continuance of the same war.

Prisoners also buy their liberty by ransom or payment of money to the enemy. The money paid goes to the State, though formerly individual captors took it for themselves. Ancient Rome prohibited her soldiers from ransoming themselves, so as to induce them to fight to their uttermost. But no other nation has followed the example of that bold and ambitious people. The practice of ransom has now become obsolete, being superseded by that of exchange.

By exchange, prisoners held by one State are released in consideration of the release of prisoners held by the other State. It is not necessary that for every man released on one side, one man should be released on the other. It is competent to the parties to make their own terms, having regard to the efficiency or position of the respective persons to be released. For instance, a State holding an officer as a prisoner may well insist that the release of a single private on the other side in exchange would not compensate them.

Prisoners of war become entitled to their freedom on the conclusion of peace, but it is permissible to keep them on for such further time as the safety or the convenience of the State may, in its opinion, reasonably require. The conclusion of

peace draws a veil over all acts done by either party during the war, save private acts having no relation to the war.

Again, a person may be seized as a prisoner of war either in his own country or in that of his enemy or on board ships of either on the high seas. He may not be seized in a neutral country or on board a neutral ship unless the latter has so identified herself with the enemy as to be regarded as herself an enemy ship. A person already a prisoner obtains his freedom the moment he is made to set foot on neutral soil, for the detaining a person as a prisoner is itself an act of war and cannot be permitted in neutral territory. An exception to this rule is recognized where he is brought into neutral waters upon board a man-of-war belonging to the enemy.

[For the above sketch, I have consulted the works of Vattel, Wheaton and Phillimore on International Law, but I am largely indebted to the excellent treatise of Hall on the same subject.]

M. A. TIRUNARAYANA CHARL.

#### CRIMINAL JUSTICE IN INDIA.

NO one who has been carefully reading the literature that is connected with the now famous "Noakhali Case" and Mr. Pennel, can help exclaiming "if this is the case in the green tree what shall it be in the dry!" For there can be no doubt that the public impression has hitherto been that Judges of the High Courts and, in a slightly lesser degree, the Judges presiding over the District Courts in the country, were not subject to the influences of the executive, and that consequently the public got better justice from them than from Magistrates, both great and small. The necessity for having a body of Magistrates who shall have no executive duties to discharge at the same time, or be subject to executive control and consequently shall not be in a position to subordinate the dispensing of real justice to administrative considerations, has been one of the sound-

est and broadest of the planks of the platform of the Indian National Congress. And indeed the proposal that these two functions should be completely separated has had high official approval, an Ex-Viceroy having gone so far as to call it 'a counsel of perfection.' But like so many other good things the practical adoption of the 'counsel' is extremely slow in coming, and if one should judge from the present attitude of the powers-that-be, nothing is likely to be done in the matter for a good long while to come. But this is perhaps the very reason why efforts should be made more vigorously than hitherto to expose the dangers of the present system and to require, of course in the most constitutional manner possible, that it shall cease as soon as may be.

The 'Pennel' case is typical in many ways. The trying judge was a European and therefore in a position to be quite free from bias for or against the accused who were Mahomedans. If he had been a weak man there was good reason for his being biassed in favor of the accused by reason of the fact that a European Superintendent of Police thought there was no case against them. And yet assuming the facts stated in Mr. Pennel's judgment to be correct, we find Mr. Pennel setting aside all considerations except that of doing justice between man and man, and pronouncing a decision which unfortunately reflected very seriously on a European officer and indirectly on the general administration. What the result has been we all know. Mr. Pennel is under suspension, and has had to appeal to the Secretary of State. One need hardly wonder therefore that the administration of Criminal Justice in the districts by Magistrates should be, to say the least, anything but satisfactory.

For the benefit of the readers of this *Review* it may perhaps be well to state briefly by what machinery Criminal Justice is being administered. There is in each district a District Magistrate who combines in himself a host of functions. He

is the Collector or Chief Revenue Officer of the district, and is the head of the district Police. He is also the Chief Forest Officer, the Chief Abkari Officer, and the head of the Local Boards in his district. Below him are some first class Magistrates who are in charge of portions of the district, and are subject to the control of the Collector and District Magistrate. Two and sometimes only one of these is a member of the Indian Civil Service, and the rest are generally Native Deputy Collectors. All these are Revenue and Executive Officers as well as Criminal Judges. Below these are a number of Subordinate Magistrates with lesser powers than First Class Magistrates but infinitely more opportunities to do wrong. These are also Revenue and Executive Officers as well as Criminal Judges. The bulk of the criminal work in each district is done by these Subordinate Magistrates from whose decisions an appeal lies to the First Class Magistrates above referred to. In certain cases the Subordinate Magistrates do not pronounce on the guilt or innocence of the accused, but make a preliminary enquiry, and if satisfied that there are sufficient grounds to believe the accused guilty send them up for trial before the Sessions Judges, who try them and decide their guilt or innocence. The District Magistrate is informed how each case has been disposed of by the Subordinate Magistrates and in a large number of cases copies of the judgments are sent to him. He scrutinizes these and passes such remarks as he considers necessary. In this way he supervises and controls the work of the Subordinate Magistrates. The work of the First Class Magistrate is similarly supervised by the Sessions Judges, but in a less effective manner. The most important part of the work of Magistrates in this country is to dispose of what have come to be known as "Police Cases." These are cases in which the Police charge persons with having committed offences, on inquiries made by them. The classes of cases in which the Police have to make inquiries and charge offenders before the Magis-



trates are numerous, but there are only a small number in which they are really interested. These include such offences as theft, robbery, dacoity, murder, and arson. In the cases of offences like these, the *Police* on receiving information are expected to investigate and detect the offenders. This work is very carefully scrutinized by Government and if it fails to satisfy the test applied to it, the officers get into disgrace. What is the test? It is nothing less than that which leads to the annual 'Slaughter of Innocents' in our University. Just as every youth who aspires for admission to the honors of the University has to secure a percentage of the total number of marks allotted to his examination questions, the Police Officer has periodically to show a certain minimum percentage of detections. The candidate for University honors resorts to "cribs," "made easy" &c. And so does the Police Officer. One offence is as good as another to him. He must find out the real offender if he can, and if he cannot, must manufacture one. If he can get true evidence against the offender, well and good; otherwise he must make up the evidence either wholly or in part. Offenders are rarely so civil as to surrender themselves to the persons appointed by Government to detect them, nor do they have the good sense to commit offences in the presence of reliable and respectable witnesses. The Police Officer's work is thus made difficult for him by the perverse ways of law-breakers, but all the same a strict Government expects a good tale of detections. Small wonder then, that the Police Officer being after all a man and therefore subject to the frailties that are incidental to his species proceeds to make up the tale by hook or crook. Innocent persons are accused on concocted evidence, or persons are put up before Magistrates for trial on the most flimsy evidence. Witnesses are coerced into giving evidence so as to support the Police Officer's theory or into omitting to give evidence that might go to disprove it. Accused persons are by means of violence forced to admit crimes,

of which they are possibly not guilty, if the Police Officer thinks that the evidence against them is weak. In fact everything is done which whether right or wrong would enable Police Officers to show a good percentage of detections and to obtain promotion or at least to avoid censure.

Now the most remarkable thing in the present system is that the Subordinate Magistrate, ay, even the superior Native Magistrate, has practically to play second fiddle to the Police Officer. The Police Officer who usually 'detects' offenders is of a very inferior class. He is what is called a Head Constable or Station House Officer and his salary ranges from Rs. 12 to Rs. 25 per mensem. But his powers are enormous. The Indian Police is constituted in a way like the Army, and consequently there is a great deal of *esprit de corps* in it. The direct head of the District Police who is a European Superintendent feels by reason of this spirit that his personal and official reputation is bound up with that of his "force" and is therefore keenly interested in all that it does or is done by. He would like to show a high percentage of detections for his district in the same way as each of his subordinates tries to show for his charge. And so, as long as his subordinates by means fair or foul manage to keep up this required percentage he would listen to nothing against them, but would support them in all they might do. In this way it happens that the European Superintendent of Police becomes very sensitive in regard to the disposal of Police cases by the Magistracy. If these throw out cases on the ground that they are false or that there is not sufficient evidence to support them, the Superintendent necessarily gets alarmed, as the result of allowing this to go on unchecked would be that the percentage of detections would fall very low in his district and he would come in for some castigation in the G. O. reviewing the work of his department. In this situation he acts as any other man would do,—and therefore small blame to him—he goes to his European brother, the District

Magistrate, and explains matters to him, how his men are working hard and conscientiously, and how a few native officers from some foolish ideas regarding justice and the legal sufficiency of evidence are throwing all kinds of obstacles in their way, and how in consequence his men are discouraged, law-breakers are let loose on society and crime shows a tendency to increase and is becoming difficult to detect. The District Magistrate is a man first and an officer afterwards. He cannot bring himself to believe that his white brother can be anything but right and though the complaint is against his subordinates who look up to him for aid and protection, finds it easy to believe that the Superintendent's story is all true and nothing but true. The result is that the unfortunate Magistrates who happen to have caused uneasiness to the Superintendent and whose official prospects are completely in the hands of the Collector and District Magistrate are made to feel the effect of the latter's displeasure. Subordinate Magistrates are also men, and therefore there is nothing strange in these officers doing their best to avoid incurring their superior's displeasure, nay, in positively trying to secure the reverse by "co-operating with" and "aiding" the Police in the work of "suppressing and detecting crime." A Collector can, if he likes, push up a subordinate of his in a few years, from a petty clerk's place to the post, say, of a Deputy Collector, or he can keep him down without advancement for years and years. He must indeed be a fool who in these circumstances does not resolve to adopt the easiest methods of securing the Collector's favour. If he is a Magistrate, one of these methods is to convict the accused in all Police cases irrespective of the merits of the cases. A man who does, pleases the Superintendent, and pleases the Collector, and his advancement is certain; why then should we blame the Magistrates for being after all only human? In this way, then, it happens that in "Police Cases" the "justice" that is dispensed by the Subordinate Magistrates is very

often a farce. No less a person than Sir Richard Garth, an Ex-Chief Justice of Bengal, wrote thus a few years ago with reference to this state of things:—"To make a Judge's promotion dependent on the favour of the Chief Police Officer is a direct and most unwholesome incentive to him to gratify his master's wishes; and so long as Criminal Courts are virtually under Police control it is hopeless to expect from them either justice or independence." Not only is the administration of criminal justice made subservient to the interests of the administration as a whole, but it is also made to harmonize with the advancement of the private interests of Magistrates. And yet this system flourishes in full vigour in this country at the beginning of the 20th century, and in Mr. Pennel's case one is able to realize the extent to which the pernicious effects of the system can reach.

Next to "Police Cases," come in importance, the cases put up before Magistrates by other departments of the administration, notably the Salt and Abkari, and the Forest Departments. In certain respects these departments are more terrible to the Magistrates than the Police. With regard to the latter there is at least a general impression even among District Magistrates and Superintendents of Police that the Subordinate Police officers sometimes go wrong and in consequence the throwing out now and then of a Police case is overlooked. But the other two departments abovementioned are concerned in protecting and adding to the revenues of Government and therefore very few cases in which they are interested are permitted to be thrown out by Magistrates. The District Magistrate is himself the Chief Forest Officer for his district, and in regard to the Salt and Abkari Revenue, the Board of Revenue itself is extremely particular that prosecutions under these laws should be all successful. It is easy to guess what will happen in these circumstances. A few figures will make things clear. In 1899 the number of persons who were tried on charges of theft, extortion, robbery

and dacoity,—all offences in the detection of which the Police are interested—was 35,466 and that convicted was 11,522 or 35·5 per cent. This proportion however does not represent the correct one with reference to Police cases in the Subordinate Magistrates' courts. The number of persons acquitted include those charged by private individuals and those acquitted by the judge or jury in the Sessions Courts. Making allowance for this, the real percentage of convictions in Police cases in the Subordinate Magistrates' Courts may be safely set down at between 50 or 60 per cent. which is bad enough in all conscience. But let us see what the percentages are in the cases under the Forest, Salt and Abkari laws. In 1899 the number of persons tried for offences under the Madras Forest Act V of 1882 was 20,686, and that convicted was 12,263 or 59 p. c. The number acquitted however includes those who were acquitted as the result of their having paid the composition required by the department, for the Government compounds offences under the Forest Act on certain terms, and the number of persons acquitted is very largely that of persons acquitted under this arrangement. The real percentage of convictions after trial is thus much higher than 59 p. c. and may safely be taken as 80 to 90. In 1899 the number of persons tried under the Madras Abkari Act I of 1886 was 19,490, and 18,944 persons or 97 p. c. were convicted. The number tried in the same year under the Madras Salt Act IV of 1889 was 7,352 and the number convicted was 7,252 or 97 p. c. These figures are very suggestive. The subordinates of the Salt Abkari and Forest Departments are not angels and except under the present system in which the Sub-Magistrates find it advisable and profitable to believe that almost every case prosecuted by these men is true, it would be impossible to get at such a high percentage of convictions.

It is hardly necessary to say more in condemnation of the present system though if one descends into details more curious revelations can be made.

But for the purpose with which this article is written enough has been said to make it clear how under the existing system justice is sacrificed to the so-called interests of the State and very frequently to private interests as well. What has been said of the Subordinate Magistrates holds good with reference to the superior Native Magistrates also, and we have now the instance of a European District and Sessions Judge who is a member of the Celestial Service paying the penalty for having administered justice regardless of the views and interests of high-placed officials. Will the British public realize the amount of mischief and injustice the existing system is working and demand that it shall be changed, and that very early? The Press both in England and in this country is now full of the progress said to have been made in so many ways in the Victorian era, and yet in a part of the empire of the late Queen for which she cared so much there prevails a system of administering criminal justice which would be a disgrace to any civilized Government and must be much more so to a Government that claims to be the most enlightened in the world and whose praises it has now become the fashion for every one to sing *ad nauseum*.

"PUBLIC SERVICE."



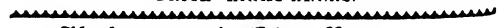
### TALES OF TENNALIRAMA,

THE FAMOUS COURT JESTER OF SOUTHERN INDIA

By Pandit S. M. Natesa Sastri, B.A.

(Member of the London Folklore Society.)

PRICE—EIGHT ANNAS.

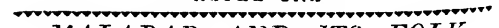


### Shakespeare's King Lear and Indian Politics.

BY

WILLIAM MILLER, C. I. E., D. D., L. L. D.,

RUPEE ONE

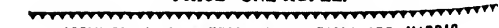


### MALABAR AND ITS FOLK

BY

T. A. GOPAL PANIKAR, B.A.

PRICE—ONE RUPEE.



APPLY TO—G. A. NATESAN & CO., ESPLANADE, MADRAS.

### THE CORROSION OF ALUMINIUM BY COOKING ACIDS AND SALT SOLUTIONS.

**A**LUMINIUM is a metal known to every one. Discovered about the end of the third decade of the last century great interest has come to be attached to it. From the time of its reduction from its compounds and the investigation of its properties, a high place has been given it as a metal of great importance, in all branches of industry. If occurrence in large abundance is taken to be a criterion determining the wide-spread use of anything, then Aluminium should be a metal destined for enormous use. It is a constituent of clay, and other compounds of it occur in smaller quantities in various parts of the earth. The comparative difficulty of its isolation was the sole impediment to the realisation of this grand destiny; but in recent years the persistent efforts of many chemists have shown the possibility of its isolation from its compounds without much difficulty, and gradually as the processes of production are improved, Aluminium will fulfil the anticipations of its early admirers. Already its importance is being largely felt. It is now used for a large number of purposes. From the limited use of it in making scientific apparatus, where lightness is of essential value, it has come to be used for a variety of purposes. One has only to go to an Aluminium warehouse to be convinced of its extensive use and of the fact that it is slowly but surely displacing copper, brass and tin in many important directions.

It is with this wide-spread use of Aluminium that this paper is concerned. Introduced into India but little more than three years ago, it has rapidly found a wide field of employment, and factories for working up the metal have come into existence in many of the larger towns of the South of India. In Madras the working of the metal was begun on a small scale, but in spite of hostile attempts to check its growth, the work has gone on increasing. Attempts have been made to

throttle this infant industry in its cradle, but they have hitherto proved to be all in vain. Inherent vigour of growth has resisted all attempts to crush it, but not without vigorous efforts on the part of those interested in the development of local industries.

A yet greater difficulty at the outset was the ignorance which prevailed even among educated people regarding Aluminium and its properties. I have often been told of the fanciful conception of Aluminium being held to be a kind of earth and therefore its use is prohibited by orthodox Brahmins. I cannot associate this conception with a knowledge of Aluminium being a constituent of clay. Everything novel, whether of use or not, is, to our ignorant masses, a thing of abhorrence, and it is generally long before they awaken to the advantage of anything of real benefit. An example of this is to be found in the ludicrous idea that earthen pots being considered by Brahmins to be corrupt and unfitted for cooking purposes, vessels made of Aluminium are also associated with uncleanness, the metal being held to be an earth.

Having thus stated some of the causes that have checked the march of Aluminium industry in this Presidency, I shall proceed to lay before the public a few experimental results, which, I hope, will not be without their significance and effect in eradicating some crude notions about the metal. I cannot claim for my work any originality, nor can I be secure from inaccuracies which are likely to attend first efforts. The experiments were not exhaustive that is, they were not conducted under distinct sets of conditions, but the results, I am told, are not without value as affording some clue to the indisputable fact that commercial Aluminium has not always behaved as theoretically the pure metal should.

A few months ago I analysed certain samples of Aluminium, qualitatively and quantitatively, to find out the nature and the relative amounts of the several impurities present in the metal. Of course everybody knows that the metals of commerce are

not altogether pure, but are associated with small quantities of other substances. A little iron, some sand, a small amount of charcoal may incidentally be mixed up with the metal in the several metallurgical processes attending the isolation of the metal. It is these slightly impure metals that are available when they are used on any large scale. It is of value to determine the nature and amount of the impurities present in these metals as they very often determine the place of the metals in the world's economy. In the case of the metal under consideration it is these impurities alone that affect the nature and character of the metal. The results of analysis will be set down in the following table, the samples which were subsequently subjected to extended observation being for convenience' sake named sample I, sample II, and sample III.

Name of sample.	Percentage of Carbon.	Percentage of Silica.	Percentage of iron.	Percentage of Aluminium.	Total.
Sample I.	0.032	0.320	0.180	99.480	100.012
Sample II.	0.095	0.337	0.302	99.40	100.134
Sample III.	0.280	0.575	0.861	98.313	100.029

The commercial metal is seen to be highly pure. There is no fear to be apprehended of the public being imposed upon by a highly sophisticated stuff in place of the metal. The worst of the three samples contains but a small percentage of impurities. The chemically pure metal as investigated by chemists is unacted upon by water, cooking acids (tartaric, citric and acetic acids) and salt solutions; and if, as will subsequently be seen, the metal is acted upon by the above-said substances, it will be allowed, I think, that it is the impurities that give the metal its new character. All the three samples were found to be acted upon by the above-named substances, with only a difference in degree. The action of water is but slight, the metal being coated with a very thin layer of the oxide after several days' exposure to its action, and further action

is then stopped. The effect of the acids was then tried separately first and afterwards in the presence of salt. In the former instance the effect was very slight but in the latter it was considerable. Unknown strengths of solutions of the acids and of common salt were used in the first set of experiments. Five per cent. solutions were employed in the next set and weak as these are, they are considerably stronger than those usually employed in culinary processes. The metal was in the form of sheet and plates of the same size and shape were taken for the purpose of observation to minimise the error due to extent of surface exposed to the solvent action or otherwise of the solutions on the samples. The following tables show the results obtained :—

*Action of Citric Acid on the Samples.*

Name of sample.	Weight in grammes metal before experiment.	Weight in grammes after one week's action of acid.	Loss in weight in grammes.	Percentage loss of weight.
Sample I.	2.8138	2.8115	0.0023	0.0817
Sample II.	2.9342	2.9322	0.0020	0.0681
Sample III.	3.2936	3.2905	0.0031	0.0941.

*Action of Tartaric Acid.*

Sample I	2.7790	2.7769	0.0021	0.0755
Sample II	2.7954	2.7930	0.0024	0.0858
Sample III	3.3778	3.3744	0.0034	0.1006

*Action of Acetic Acid.*

Name of sample.	Weight of metal in grammes before experiment.	Weight of metal in grammes after one week's action.	Loss in weight.	Percentage loss.
Sample I	2.8416	2.8392	0.0024	0.0844
Sample II	2.7942	2.7920	0.0022	0.0787
Sample III	3.6954	3.6900	0.0054	0.1190

*Action of equal volumes of sols.  
of Citric Acid and Commonsalt.*

Sample I	2.8115	2.7684	0.0431	1.533
Sample II	2.9322	2.7387	0.1935	6.599
Sample III	3.2905	3.0720	0.2185	6.640

*Action of equal volumes of sols.  
Tartaric acid and common salt.*

Sample I	2.7769	2.7027	0.0742	2.675
Sample II	2.7930	2.6260	0.1670	5.979
Sample III	3.3744	3.1790	0.1954	5.820

*Action of equal volumes of sols.  
of Acetic Acid and Commonsalt.*

Sample I	2.8392	2.8336	0.0056	0.197
Sample II	2.7920	2.7826	0.0094	0.336
Sample III	3.6900	3.6776	0.0124	0.336

*Action of equal volumes of sol. of Citric, Tartaric  
and Acetic acids and Commonsalt.*

Name of sample.	Weight in grammes before experiment.	Weight in grammes after one week's action in sols.	Loss in weight	Percentage loss.
Sample I	2.7518	2.7290	0.0228	0.828
Sample II	2.7770	2.7155	0.0615	2.214
Sample III	3.8018	3.7082	0.0936	2.462

It is clear from the above figures that the slight action which each of the solutions of acids has upon the samples is greatly increased by the presence of common salt. That this action is determined by the impurities present is also very clear. The sample with the least amount of impurity is acted upon the least and that with the greatest amount of foreign admixture is acted upon the most. It is also plain that the minimising

of impurities will certainly result in the decreasing action of acids and salt solution. It is therefore highly desirable that only the very purest metal should be put upon the market, and that the manufacturers should devote their attention to the elimination of even the small quantity of impurity which shall exist in all commercial supplies.

It will be interesting to note in this connection, a certain incident relating to the use of Aluminium in making vessels. All are doubtless aware that the extreme lightness of the metal makes it eminently fitted for use in connection with the army, and continental nations have successfully employed it for this purpose. In one instance, however, the use of Aluminium proved a failure. To increase the hardness of the metal it was alloyed with a little copper with the result that an enormous loss was incurred. We cannot help wishing that the experiment had been tried on a smaller scale. A little copper although found to be of advantage in one way was found to be attended with evil in others. When used for culinary purposes, the metal must not be contaminated with copper as the alloy is sooner and to a greater extent acted upon by the acids commonly found in foodstuffs and by salt solutions, than the metal itself.

Every one knows how inconvenient it is to carry a heavy vessel when on travel and it is certainly an improvement to have the heavy vessel of brass or copper replaced by one of Aluminium. All who know of the hard, toilsome life of the fighting men will surely think it a great benefit conferred upon them if they are provided with light Aluminium vessels instead of the burdensome copper brass ones.

It would really be going too far if I were to dilate upon the advantage which Aluminium has over copper and brass which two latter materials are at present making but a show of opposition against the former. The use of brass is not allowable in a large number of culinary operations, while copper to be of real service has got often to be tinned. The use of both is certainly hazardous in

the preparation of food with too much of acid ingredient; and it is a well-known fact that to many sects, among the dwellers in Southern India, food loses much of its relish without the acid ingredients.

Aluminium has sometimes failed to prove a satisfactory substitute for brass and copper and without enquiry the metal has been rashly condemned by ignorant prejudice. My experiments show the probable cause of most failures and indicate the direction in which a remedy lies. Honest inquiry is better than dogmatic assumption, especially when the latter is based upon insufficient data.

M. DAMODARA KINI.

#### The World of Books.

#### THE CHILD: A STUDY IN THE EVOLUTION OF MAN. (By Walter Scott, Limited.)

The aim of this very interesting volume in the *Contemporary Science Series* is well enough brought out by the rather long name which is given to it. In this volume the child is studied as a living member of communities that are progressing in civilisation, and it is shown how in all such communities the child determines the man and the woman and thus becomes the maker of the community and the conditions of its civilisation. "The child, in the helpless infancy of his first years, in his later activity of play, in his *Naivete* and genius, in his repetitions and recapitulations of the race's history, in his wonderful variety and manifoldness, in his atavisms and prophecies, in his brutish and in his divine characteristics, is the evolutionary being of our species, he in whom the useless past tends to be suppressed and the beneficial future to be foretold. In a sense, he is all." In these words of the author we find an outline-sketch of the scope and contents of the work, a careful study of which is sure to enable us to discover a most surprisingly full meaning in the poetic expression of Wordsworth that "the child is father of the man." We know that in modern days the child has been studied in various ways. He has been studied in his pre-natal condition; and his anatomy, physiology and psychology are all seen to be important subjects of investigation among the scientific men of to-day. But these investigations are not naturally competent to give us anything like a scientific estimate of the value of child-life in the building of human civilisation. Although in this work child-life is studied from

the standpoint of man's phylogenesis as well as his ontogenesis, it is the latter aspect of the subject that has received a fuller treatment; and we believe that the author is quite right in having bestowed greater attention on the ontogenetic aspect of child-life in its relation to the evolution of man and his history. Indeed, it is in this aspect of the subject that more of human interest is centred than in the more markedly academic question of the phylogenesis of man. The ontogenetic study of the child is of great practical importance in solving problems bearing upon the man's education, civilisation, culture and social as well as ethical progress; and to the philologist and more particularly to the anthropologist, it forms an invaluable source of highly useful and suggestive information. It is said here that child-study gives a better evidence of the unity of the human race than anything else that has a bearing upon the question whether monogamy or polygamy is the true theory regarding the origin of our race; and it is also shown accordingly that the white child clearly demonstrates that the white man is in all probability a Mongolian, modified by natural causes. The author further thinks that women and children are the most generalised forms of the human species, that the future of humanity lies more in woman than in man, and that the child is full of the prophecy of that future. It seems to have been long known to observant students of human societies that the mother conserves all that constitutes the better part of human nature, and that in every society there are many children which come forth year after year with greater or less of resemblances and differences. The genius of humanity is implanted in the child, and it is the mother alone that can foster it to the best advantage of mankind as a whole. Under her guidance even the long and helpless period of human infancy acquires a great ethical and intellectual significance. The very playfulness of the child is the means by which man becomes directly and intimately acquainted with the nature around him; and it is the child's habit of play that accustoms man to his more serious habit of work. In spite of the determining power of heredity, it is certainly hopeful and consoling to be told that crime is often a product of childhood without any criminality on the part of the child. All these things necessarily have a bearing on the great question of human education and the organisation of human communities so as to make the very best form of that education and the consequent enlightenment practically realisable among them. If all the potentialities of the child are allowed to have a free play and a full scope so as neither to curb nor distort his nature, then

even old age becomes, as a matter of course, serviceable in the cause of human progress and the evolution of the world's civilisation. "In old age," as the author says, "the individual as such, in his ontogenetic right, can serve the race with real distinction." If the first childhood of the child is unconsciously beneficial to human progress, the second childhood of the old man may be seen consciously to serve the same end, when the success of old age is measured by the amount of the life of the race which the old man has so absorbed as to be able to render both intellectual and moral service to it and thus help on its expansion and illumination. There are many more things of interest in this absorbingly interesting volume. We believe that we have said enough about it here to rouse the curiosity of the intelligent reader; and relying on the curiosity so roused, we gladly recommend the volume to him, as we feel certain, that it will considerably add to his knowledge and increase his edification and usefulness as a man.

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#### THE INDUSTRIAL REVOLUTION *by*

*C. Beard (Swan Sonnenschein & Co.)*

Such is the title of a very suggestive book which has just been given to the world by Mr. Beard with a preface by York Powell. Written primarily for the information of working people, it contains within the compass of a hundred pages, the story of the remarkable transformation that have been effected within the last hundred and fifty years, by discoveries and inventions which have radically altered the methods of production and distribution and thus revolutionised all the economic functions of society. To us in India, the book ought to be extremely welcome at the present moment. There is no doubt that material prosperity is the only safe foundation on which national progress should be built up and it is but right that the highest and the most cultured intellects should devote their attention to subjects of social welfare. It is an auspicious indication that the subject of industrial regeneration of India is largely looming in recent literature, but then there is a lack of grasp of those broad principles which underlie success in the industrial world which is either wanton or due to ignorance. The Government of India is not always flush of money and the little that it is prepared to spend towards improving the industries of this country will not be allowed to flow into channels productive of the maximum beneficial results. It is hard to suppose that the rulers of India, selected out of a nation whose instincts and policy are, as Lord Rosebery said, more than half commercial, have not

recognised the supreme industrial lesson of the hour. The wealth and progress of the leading nations of the world have been due to the employment of machinery, for the production and satisfaction of our wants, and the application of extra human power for the operation of such machinery. Yet the Government in this country proposes to improve the *manual* industries and enable the hand worker to compete against the power-loom and fly-wheel! But it is too much to expect that India should be encouraged to produce manufactures which will tell against the English trader in the general market.

State aid may certainly go a great way in establishing and maintaining nascent industries but, after all, it must be said that the industrial salvation of India must be worked out by her own sons, each working for his own individual profit. Self-interest is the greatest stimulus to the acquisition of fortunes, but in the acquisition of such wealth, it is impossible to monopolise it without the people at large taking a share.

There are several shrewd men in India who would embark on commercial undertakings if it could be only shown to them that profit lies in such and such lines. At present, the courage necessary for such venture is wanting, and the lack of it is due to want of the necessary technical skill. The latter again is the result of sound knowledge. The problem then is how best to supply such knowledge. In the words of York Powell, "knowledge and the will to use it, and the courage and perseverance required to use it rightly,—these are the necessities of progress and of well-being of any kind. Ignorance that may be felt but that may, by honest effort, be destroyed is the cause of many more of our troubles than we like to admit. Science not Creed, is the deliverer, if we will only take the trouble to follow it. There will be plenty of mistakes on the way, but if a man means to learn by his former mistakes, he nearly always has the chance, and the advance, though slow, will be continuous."

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#### THE SCIENCE OF THE EMOTIONS. *By* *Bhagavan Das, M.A. (Theosophical Publishing Society, London and Benares.)*

This little volume is one of the most original and suggestive publications issued under the auspices of the Theosophical Society during recent years. It treats of the desire-nature of man, his emotions, from a purely psychological standpoint, and attempts to lead on from the science of the emotions to that highest science which deals with the very roots of life, with the ultimate principles of the universe, the science of peace. The analysis and



classification of the emotions is one of the least satisfactory branches of modern psychology. If we ask the question, what is an emotion, we find the psychologists giving varying and inconsistent answers. According to some, emotion is essentially a kind of sensation, due to general organic disturbance. According to others, it is the massive revival by association of the past pleasures and pains. According to a third school, it is a tendency to behave in a particular way, and must be regarded as a mode of conative consciousness. Each of these views is beset with difficulties and psychology is yet to deliver its final verdict on the subject. But the last view seems to have the balance of opinion on its side and is accepted by some of the most prominent psychologists of the day. The author of the volume under review follows this line of thought and with the help of the introspective and analytical method arrives at the result that emotion is a desire *plus* an intellectual cognition. We find from experience that particular situations in life arouse particular emotions, pleasurable or painful. The truth here is, says Bhagavan Das, that emotions are *desires* either to perpetuate the situation, if pleasurable, or to escape out of it, if painful, and the prospective fulfilment of the desire or the defeat thereof, in expectation and imagination, gives the foretaste of the corresponding pleasure or pain, and makes the pleasurable or painfulness of the total mood. It is interesting to observe that this view very nearly corresponds with the view of Professor Stout, namely, that every special kind of emotion essentially involves a characteristic end or direction of activity, mental or bodily, and is agreeable or disagreeable according as the conative tendencies involved in it are thwarted or gratified.

The most interesting and original contribution which Mr. Bhagavan Das makes to the psychology of emotions is his attempt to classify them on a simple psychological principle. Starting with the proposition that emotions are desires, he points out that there are two elementary desires, namely, (1) the desire to unite with an object that causes pleasure; and (2) the desire to separate from an object which causes pain; in other words, Attraction and Repulsion, Like and Dislike, Love and Hate, or any other pair of names that may seem best. This Attraction, Like or Love, differentiates into and evolves the more complex forms, as between human being and human being. (i) Attraction *plus* the consciousness of the equality with one's self of the attractive object is Affection or Love proper. (ii) Attraction *plus* the consciousness of the superiority to one's self of

the attractive object is Reverence. (iii) Attraction *plus* the consciousness of the inferiority to one's self of the attractive object is Benevolence. Repulsion, Dislike, Hate may be analysed in exactly the same manner as Attraction, and yields the three principal sub-divisions of (i) Anger, in the case of the equality of the object of it. (ii) Fear, in the case of the superiority of the object of it, and (iii) Pride, in the case of the inferiority of the object of it. All mental moods whatever which are by general consensus called emotions are shown (a) either to fall under one or other of the above two triplets which cover the six principal emotions of humanity; or (b) to be compounds consisting of elements taken from both. Thus from the two primary elements of human nature, Love and Hate, Mr. Bhagavan Das, by a process, so to speak, of logical permutation and combination, aided by the distinctions of equality, superiority and inferiority arising between Self and Self, works out an elaborate scheme of emotions. This is certainly very ingenious as a feat of psychological analysis and deserves the careful consideration of the students of psychology. The main objection to this scheme that strikes us at the outset, is that it does not sufficiently recognise the wide range and distribution of emotions and the varied nature of the conditions that arouse it. The same specific kind of emotion may occur at very various levels of mental development. It follows from this that we must be very careful to avoid giving too limited a definition of the specific forms of emotion. Mr. Bhagavan Das seems to err in this direction and his scheme would strictly apply only to a somewhat developed stage of human ideational consciousness. He surveys the phenomena of mind from the peculiar standpoint of one who is "psychologising," or subjectively observant and does not supplement the results of introspection by the facts revealed by objective and comparative methods. His work, nevertheless, is sound and solid, so far as it goes, and deserves a prominent place in contemporary psychological speculation.

The chief aim of the author throughout the discussion is distinctly ethical. The last chapter on the application of the science of emotions to the conduct of life is full of inspiring and elevating thoughts and gives us an insight into his philosophy of life. He says that if a true science of the emotions could be discovered, the art of consciously, deliberately, and purposefully cultivating the higher and better ones and weeding out the lower and the evil would become a possibility. We heartily endorse this remark and trust that the readers of this volume may find it of some help in

the culture and regulation of their emotional nature, the soundness and purity of which lie at the root of human welfare.

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**IN TIBET AND CHINESE TURKESTAN:  
 BEING THE RECORD OF THREE YEARS'  
 EXPLORATION, by Captain H. H. P. Deasy  
 late 16th Queen's Lancers (T. Fisher Unwin,  
 London. Price 21/.)**

As the title of the book implies, the ambition of Captain Deasy was to explore some unknown land. As luck would have it, a map of Tibet prepared from the observations of recent travellers fell into his hands in which a certain tract of land was marked "unexplored." This fired his ambition with the result that he obtained leave of absence from his Commission in the Army and set out on his journey in the spring of 1896 from Leh towards Eastern Tibet thoroughly equipping himself for making a survey of the whole of that region. Although he accomplished some good work, his progress towards east was opposed at every step by the Tibetan officials in consequence of which he had to return to Leh considerably disappointed after an absence of about 8 months. His desire for exploration was not satiated by the abortive expedition he conducted in Tibet. It was impossible for him to induce the India Military Department to give him leave of absence to conduct another. So, he resigned the Commission in the following year and set out from Gilgit this time towards Chinese Turkestan, the immediate purpose of which journey was the exploration and careful survey of that part of the valley of the Yarkand river extending from the west end of Raskam to the neighbourhood of Yarkand. As in Tibet so in Chinese Turkestan, the difficulties that the author had undergone in obtaining transport, supplies, guides and trustworthy men were immense on account of the intense dislike of the natives to strangers. At every step, he met with opposition from the jealous Chinese and Tibetan officials. The purpose of his visit was misjudged and misinterpreted. The Chinese Teetai (military head) would not allow the author to conduct theodolite observations thinking that the result would somehow enable the observer to throw cannon balls within the city with unerring precision. The Russian officials regarded travellers of other nationalities as intruders. A belief was propagated among the natives by the Russian Consul general that the Indian Government with a view to extend its frontier beyond the Hindu Kush had sent the author as its secret agent. In spite of the hostile attitude of the natives and officials, the author was able to accomplish much without the least hitch. A large

collection of botanical and zoological specimens were made, the heights of a large number of peaks were accurately measured and their positions marked and the courses of several important rivers were also traced. But no book on Central Asian matters will be considered in military circles in India to merit any praise if it does not also contain some observations on the political situation of the land where the three Empires meet. So our author devotes an entire chapter to the consideration of Chinese administration of Chinese Turkestan and Russian designs. He says, "The province is absolutely at the mercy of Russia and will be unfit to offer any resistance when it suits that power to take it. The methods by which Russia is working towards that end are however not military but diplomatic." He thinks that Russian occupation of the province need not, so far as commerce is concerned, appreciably affect the interests of Great Britain, for he says that the trade with India is small and decreasing. "No sane man," he says, "acquainted with Sin Chiang would advise the Government of India to saddle itself with its administration." But he would recommend a careful watch to be kept by the Indian Government on movements of Russia in Central Asia especially in Tibet, for, Russia's ultimate aim according to him is to possess the Indian Empire. We may overlook this recommendation as it is the usual burden of the song of every military man in India. On the whole the book is an interesting reading though one may feel some portions of the book tedious on account of the uniform incidents narrated. Here, however, is an incident which will not fail to create some mirth:—"The rain was still falling, the animals could not be loaded at once and those which were first ready instead of waiting patiently for the others, went off to visit their companions. The ponies galloped off, kicking and fighting with each other, while the donkeys quietly lay down and tried to roll over on their backs." The book is interspersed with illustrations of the characteristic scenes of those regions. A map showing the routes, camps of the author's travel and also the peaks, valleys, lakes, &c., discovered by him is appended. On the whole it is impossible not to be impressed with the trouble and labour voluntarily undertaken by the author with a view to further the development of geographical knowledge.

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**"IN BAD COMPANY" AND OTHER STORIES**  
*By Rolfe Boldrewood. (London: MacMillan & Co.,  
 Ltd.: Colonial Library).*

A volume of instructive stories dealing with Australia. "In Bad Company" which is deservedly given the place of honour and gives the title

to this collection of readable sketches, is a serious exposition from what may be called the large-staked Capitalist's point of view of the socialistic problem in the shape in which it presents itself in that fast-progressed Colony. The Labour Question, Agrarian problems, the all-important sheep farming and kindred topics are touched up in the attractive garb of the thin-veiled story, and a few historic retrospects and sketches which will in time supply rich and true material for the future historian of this important colony complete the collection. The author has the true vein of the born story-teller, and shows clearly that he knows what he is writing about, and is, above all, an intense lover of his native land. We would heartily recommend a perusal of the volume to all who take an interest in Australia and would fain acquaint themselves with all things Australian, in a manner combining interest with instruction.

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**"THE GOLDEN TOOTH:"** *By J. Maclaren Cobban.* (London: George Bell and Sons: *Indian Colonial Library.*)

A cleverly written readable story, worked out, it must be admitted, of rather unpromising materials. Will Lowas, a discharged soldier of the ordinary type of Tommy Atkins, gets hauled up on a charge of murder by a plausible net of circumstantial evidence. A chance acquaintance who calls himself 'Townshend' throws himself heart and soul to befriend Lowas, and does a bit of smart amateuring in the detective line to bring the real culprits to book. Townshend who plays a very important part throughout the story is, by sundry hints thrown out here and there, invested with a certain amount of mystery as to his real status and calling, which mystery however the author has not cared to clear up to the end. It is to be presumed apparently that he is a character out of some earlier novels of the author, as he is introduced to us as an old acquaintance. However this may be, this Townshend, mainly through the clue afforded by a golden tooth picked up by him accidentally at the scene of the crime shortly after the occurrence, succeeds in getting hold of the true culprits who are no other than the deceased man's step-mother and her lover. This step-mother turns out to be a heartless adventuress, who had been already *much* married, when she bound herself in wedlock to the deceased's father. As usual the innocent man is cleared in the end and handed back to his loving and brave, faithful spouse. The reader's interest in the story is well sustained to the end by clever and unlooked-for developments, though a shade of improbability in an incident here and there mars the artistic effect of the work. The account of the escape

of Lowas from prison, the ease with which he gets over the consequences of this ill-judged step, but most of all the amazing celerity with which he is discovered to be the man who should have stood in the shoes of the deceased as the rightful squire of the domain, are matters which however necessary to the exigencies of the story jar a little on even the novel-reader's sense of the probabilities. But these, after all, are minor points. The story as a whole is eminently readable and will form a good companion to while away a couple of tedious afternoons or a wearisome railway journey.

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**Books Received.**  
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WALTER SCOTT & Co. :—

The Mediterranean Race: A Study of the origin of European peoples, by G. Sergi ...

SATAKOPACHARI & Co. :—

The City of Vidayaranya, A historical romance in Tamil, by C. B. Srinivasa Iyengar ...

LONGMANS & Co.—

The Twentieth Century Inventions, by Geo. Sutherland, M.A. ... ..

SAMUEL BAGSTER & SONS :—

Stones Rolled Away and other addresses to young men, delivered in America by H. Drummond, F. G. S. ... ..

GEORGE BELL & SONS :—

The Mystery of the Clasped Hands, by Guy Boothby ... ..  
 The Golden Tooth, by J. Maclaren Cobban...  
 Five years of my life, by Alfred Dreyfus ...

T. FISHER UNWIN :—

The Wizard's Knot, by W. Barry ... ..  
 Black Mary, by Allan McAulay. ... ..  
 As the Chinese see Us, by T. G. Selby. ... ..  
 In Tibet and Chinese Turkestan, by Capt. H. H. P. Deasy ... ..  
 England's Neglect of Science, by John Perry 2/6.

The Life of Richard Cobden, by John Morley.  
 The Labour Movement by L. T. Hobhouse, M.A.

MAC MILLAN & Co. :—

The Silver Skull, by S. R. Crocket ... ..  
 In Bad Company and other Stories, by Rolfe Boldrewood. ... ..  
 The Helmet of Nature, by Bertha Runkle ...

DAWARREN & WARD LTD :—

Perfumes and Cosmetics.

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## Topics from Periodicals.

### CHINA AND MISSIONARIES.

Under this heading the June number of the *Open Court* contains a historical retrospect of Missionary Christianity in China contributed by a Mr. M. D. Conway. It was Lord Salisbury who said, that, in lands which are in their new career as a world-power, the Missionary comes first, the soldier next and finally loss of territory. Mr. Conway follows essentially the same view. He is critical, and shows his staunch allegiance to a belief in the lawless and blood-thirsty steps by which the American proselytisers got their foothold in China. Our author begins by denying that the superior progress of Western nations results from their Christianity. He says:—

One need only contrast the greatness of pagan Greece with the insignificance of Christianised Greece to find that the finest civilisation is by no means a fruit of Christianity. In fact there has never been a real civilisation planted in any nation by a propaganda of Christianity. National prestige once involved, a flag lifted, and the one great necessity is to win; success, at whatever cost, comes to mean "progress"; all sorts of meanness, trickery, crime, inhumanity, are condoned for the sake of triumph, and the world is thus gained for a religion through the loss of its soul. Jesus, prophet of the individual heart and happiness, concerned for no kingdom but that "within," warned his friends against foreign missions, even so near as Samaria, and in trying to reform their own countrymen to withdraw from cities where they were persecuted. Their outward victories would there be inward defeats.

In the view of the author the American missionary propaganda in China was "conceived in unconstitutionality and born in deception." By the treaty of 1844 the citizens of the United States were allowed to build houses, hospitals, churches and cemeteries. The churches were meant simply for the use of the American citizens, but the precaution was taken that the sites of all the places should be rent and not bought and should be selected by the local authorities of the two Governments "having due regard to the feelings of the people in the location thereof." This treaty admitted no propaganda and was therefore superseded by that of 1858 which reads as follows:—

"The principles of the Christian religion, as professed by the Protestant and Roman Catholic Churches are recognised as teaching men to do good, and to do to others as they would have others do to them. Hereafter those who quietly profess and teach these doctrines shall not be harassed or persecuted on account of their faith. Any persons, whether citizens of the United States or Chinese converts, who, according to these tenets, peaceably teach and practise the principles of Christianity, shall, in no case, be interfered with or molested."

But the Government established the Protestant and Catholic Churches, to begin with, by declaring that the object of those churches was simply to teach men "to do good and to do to others as they would have others do to them." The two churches were to be exempted on condition that they taught and practised peaceably the tenets and principles named "benevolence and the Golden Rule." But mark what followed:—

The reader will observe, however, that in 1868, when the contract was confirmed and added to, its remarkable terms are not recited, but referred to as a stipulation "for the exemption of Christian citizens and Chinese converts from persecution in China on account of their faith." The Chinese negotiators of 1868 were "childlike and bland," as yet without American graduation in "ways that are dark," and did not observe that this reference to the original treaty, omitting the repetition of its conditions, might possibly be claimed, in any particular case, as their legal construction.

How are the American missionaries fulfilling the contract made for them by the United States in 1858, confirmed in 1868:

Dr. Ament who has been for many years the head of American missions in China is their chosen leader and spokesman. He demands a further law that will place Christianity on an equal footing with Buddhism and Mahomedanism. These religions needed no legislation for their welcome, and Mr. Conway is naturally indignant to hear that armed force is needed to teach the "Golden Rule." Dr. Ament adds that the Chinese are naturally intolerant of Christianity and especially, it would appear, of its American representatives. The following from Dr. Ament casts light on the anomaly:—

"Christianity is essentially a militant religion, and in course of time will create more or less disturbance in unevangelised countries. We would not give much for Christianity if it did not do so."

"Opposition is sometimes the greatest praise which can be given to the work we are endeavouring to do. We are thankful that Christianity is not a negative force in the community, but is a positive lever which is lifting society to better things."

"Experience in China proves that seeming weakness in dealing with the Chinese only increases their spirit of distrust and their desire to continue in crime. Excessive kindness they will attribute to fear; the spirit of altruism is entirely alien to their natures."

It would be impossible to summarise, within the limits of space available here, the details of Dr. Ament's misdeeds, associated with every kind of cruelty and with heavy losses and disasters. Suffice it to say that the procedure of this pious invader leads the reader to conclude that on account of the aggression of the inferior men, Christianity loses all the ethical refinements and sufferings

of dogma familiar in churches at home. But let the writer say his say :—

The American people are confronted by the fact that their late Minister in China by his authorisation of the exaction of indemnities from Chinese people has not only violated our treaties but placed us in the position of crusaders propagating religion (!) by the sword. There is too much reason to fear that our government will yield to some powerful pressure to accept this attitude. Dr. Ament may be sacrificed, but no scapegoat will redress the wrongs we have done as a nation. It is absolutely necessary that every coin extorted by the missionaries under sanction of our Minister shall be restored to the victimised villagers. That the utmost effort should be made to recompense the owners of the premises of which the missionaries took possession, one of them a palace, for the articles found in them and, as Dr. Ament states, sold on the suggestion of the United States Minister. Our government introduced these soul-saving looters under a contract with China for their teaching and practising the Golden Rule; through our Minister we have advised and sanctioned their violations of our treaties; and we are responsible. It will be necessary then to officially instruct the missionaries that this government cannot legally guarantee them against troubles in China beyond memorialising the Chinese law-officers of them. All Chinese offenders against United States citizens must be tried in Chinese tribunals. They must be assured that winning the confidence and affection of the people is their best security. It is the more important that our government should act promptly and inflexibly in the matter because there is little doubt that the people who go out to China as missionaries in future will be of even a lower type than those now there.

#### TECHNICAL EDUCATION IN GERMANY.

"In these days of keen competition throughout all spheres of commercial and industrial activity, when the law of the survival of the fittest seems more than ever to assert itself, and when attainment of the highest degree of manual as well as theoretical excellence is essential to success, the study of the methods to be employed calls for close and unremitting attention. Not only must machinery and tools be of the highest order, but the operatives in charge should know how to handle them with quick-witted intelligence, well-trained practical knowledge and manual dexterity." With these words Mr. Fuhr opens his interesting article on Technical Education in the June number of the *Chambers' Journal* and to disprove the theory that with the wider application of machinery human labour has been lowered to the level of mere automatic action—held even by men so highly gifted as the late Mr. Ruskin, quotes Professor Fitzgerald who maintains that the tremendous rise in the wages during the nineteenth century is in itself a convincing proof of the fact that the proper handling of improved modern machinery calls for a much higher order of intelligence than what used to suffice for the primitive mechanisms formerly in use. Mr. Fuhr would

therefore devise technical education in such a manner that it would in part to factory operatives not only a knowledge of the raw materials, but would exact from them, also thrifty care in dealing with them, both of which, he says, should go hand in hand with the closest attention to details and great dexterity of action, so that a minimum of expenditure of time and means may yield a maximum result, both as to quality and quantity of the articles produced. Another essential point urged by him is that the mental and manual training obtainable by such education should be diffused widely enough to enable not only the favoured few but the great mass of the people to attain a higher standard of excellence.

Mr. Fuhr has evidently high admiration for Pestalozzi's "inductive method" of instruction as adopted by Baron Von Stein, the eminent statesman and social reformer to German Schools, of which, he says "From the University down to the Kindergarten the entire organization was placed under Government control. Attendance at the elementary schools was rendered compulsory by law; poor people had to pay no fees whatever and for the others, they were fixed low enough to throw even academic training open to the highly-gifted ones of almost every stratum of society. Professors and teachers, from the highest to the lowest, were henceforth Government officials and had to be systematically trained at seminaries provided for the purpose." Upon this excellent system of national education, partly compulsory, technical training has been engrafted, also to a large extent under the control and at the expense of Government. He says :—

"Technical education in Germany begins where elementary education ends, with the age of four to fifteen. After special preparation and examination by the clergy, each child then for the first time partakes of Holy Communion, and in the generality of cases this event marks entrance into the active pursuits of life. The great majority of children go into service as factory workers, agricultural labourers, apprentices to the various trades, domestic servants, and so forth; while only those of the wealthier classes continue their education at the intermediate schools, whence a limited number finally matriculate at the universities."

There are three classes of technical schools in Germany, the low grade, the middle grade and the higher or collegiate school. The aim of the low grade schools is not to sift the more intelligent out of the great mass of scholars, thus enabling the comparatively few to excel in the battle of life, but rather to raise the mental standard of all, and improve their manual dexterity—in fact 'to train

them in habits of accurate observation, careful measurement and exact workmanship.' The state pays particular attention to these schools. He says:—

"The state is justified, in giving particular attention to these schools, which are to render the great army of labour fitter to cope with its destiny and it seems likewise just and proper that parishes and communes, and trade unions, agriculture associations, factory owners, and the employers of labour generally should contribute to their support, on condition that poor children are taught free and that only very moderate fees are charged for those whose parents or guardians are able to pay."

Excellent as it is, the serious defect of the German system is that a great deal of teaching is conducted on week day evenings and on Sundays, a time which the scholars would keep for themselves after the day's professional work and for religious pursuits. Selfish greed on the part of the employers and thoughtless folly on the part of scholars render day teaching impossible on week-days and night and Sunday teaching almost useless. The following is a brief summary of the course of instruction given in the several grades of technical schools.

At all the great centres of manufacturing industry, special attention is given in the elementary technical schools to each separate branch; while in agricultural or mining districts the training connected with these pursuits is made prominent, as a matter of course. Workshops are attached where apprentices and even masters' assistants can improve their practical knowledge of the various handicrafts; and girls' schools are provided to teach sewing, knitting, dressmaking, millinery, laundry, and dairy-work, cooking, fruit-preserving, as well as orthography, book-keeping, shorthand, type-writing, &c. In the smaller villages, where no agricultural or technical school exists, itinerant teachers attend regularly at stated times. Success pre-eminently depends on the fitness of members of the teaching staff, who should not be mere theorists, but men and women in whom pedagogic aptitude is blended with sound practical knowledge and experience. It is obvious that such teachers are difficult to procure, and the German Governments deserve great credit for the masterly way in which they have solved the problem. No expense has been spared to render the training seminaries thoroughly efficient, and great care is taken to select the most suitable individual for each particular appointment. Promotion can only be obtained by merit, liberal pensions are granted, and teachers are so well paid and occupy so high a social position that some of the best elements of the nation are attracted to the ranks of the profession.

Fitness for a particular sphere of labour being the object at which scholars attending elementary technical schools aim, it is impressed upon the teachers that no higher knowledge than what is needed to attain that end must be imparted, but that the instruction must be given with all thoroughness, step by step, no link in the chain being hurriedly passed over, and at the same time the practical utility of each onward move clearly demonstrated so that the scholars may appreciate it as palpable progress. Instruction at such schools should be much

more practical than theoretical, and an efficient staff of inspectors is set to watch that this main object is always kept in view. This staff consists exclusively of experts, whose experience enables them to advise the teachers and suggest improvements of method. In addition to the subjects already mentioned, the following receive prominent attention at the low-grade technical schools—namely, the elements of natural sciences, such as geography, chemistry, and physics, mechanics, arithmetic, and above all *drawing*.

Middle-grade or intermediate technical schools naturally fall into two widely distinct categories—schools of art and schools of science. Industries attain highest perfection when art aids in shaping and embellishing their products. Manufacturers can then readily hold their own against competition, and superiority of shape, quality, or design assures the easy sale of fabrics at remunerative prices. Schools of art point the way in which production by hand or by machinery should be blended with art. The object of their training is to open the minds of scholars to the perception and due appreciation of what is beautiful, at the same time leading them to translate their conceptions into practical work, be it in manufactures, architecture, the plastic arts, or painting and decoration. France, to a certain extent still enjoys the advantage of having taken the lead in this direction. Her distinguished and eminently practical statesman, Colbert founded the first establishment of the kind in the reign of Louis XIV: and French supremacy in art-industry remained unchallenged until 1857, when the South Kensington Museum, School of Art, and Training Seminary were called into existence. Austria followed in 1863, with her Museum of Art and Industry to which, five years later, the Industrial School of Art at Vienna was added. The first attempt in Germany was the Hall of Industry at Karlsruhe in the Grand-duchy of Baden, opened in 1865; while during the year 1867, originally by way of private enterprise, the Industrial Museum at Berlin and the National Museum of Munich became available to the public. Slow to commence, Germany has taken vast strides since the reconstitution of the Empire in 1870, for she now possesses sixteen large central organisations of the kind, with numerous offshoots; while there are seven in go-ahead little Switzerland, and four in Austria. Attached to each centre is an extensive and choice collection of art specimens, models, and designs, great attention being given to keeping them up to a high standard by constant additions, as their importance in rendering instruction suggestive and practically useful is fully recognised. These institutions are now supported, controlled, and managed by the State, and are open to all alike, on payment of a moderate fee which, on application to that effect and due cause being shown, can be still further reduced or altogether remitted.

German schools of science applied to production, on the other hand, are still to a large extent private enterprise; but the day is probably not far distant when in this field also the State will interfere more and more, with a view to uniformity of management and efficient control. Without exacting from scholars the high degree of scientific preparation required for admission to the technical college, the aim of the schools is to impart higher instruction in the sciences, at the same time keeping their practical application always in view. Scholars enter for two or three years, and while they remain must give their whole time. Prominence is given to electro-technical knowledge, the construction of the more complex kinds of machinery, improvements in the methods of production, and to the more elevated phases of com-

mercial culture. The scholars' age varies between eighteen and twenty-one; and when their course is finished they enter direct upon the practical career chosen, be it as electricians, mechanical or civil engineers, assistant technical managers, merchants, or bankers.

Finally, there are the technical high-schools fostered by the State for the purpose of giving the very highest scientific training in connection with all kinds of production. To these institutions the proud privilege has lately been accorded by the Imperial Government of conferring degrees as Doctors of Engineering, thus raising them almost to a level with the universities. Theoretical rather than practical training is here the prominent feature, and the honour of originating these polytechnical colleges, as they are also called, rests again with France. The *Paries Ecole Polytechnic* dates as far back as 1794, and proved so markedly successful that similar establishments soon grew up in other countries. Germany has nine of them now, the most important being located at Charlottenburg, that pleasant suburb of Berlin, with its healthy sylvan surroundings. About three thousand students are there in regular attendance, obtaining the highest possible training as agriculturists, architects, engineers, electricians, &c. Mining, smelting, and forest lore are also taught at some of these high-schools, although, as a general rule, the State provides separate academies for the study of these pursuits.

#### THE THEORY OF THE LIE IN IBSEN.

Mono L. B. Hanappier writes in the last number of *Revue-Franco-Allemande* on the above subject. After dwelling on the life-like portraiture of the personages in Ibsen's drama, the writer calls attention to the idealism of the Scandinavian dramatist. His realism of which so much has been said is merely a means to an end. The more life-like the characters the easier will they convey the lessons that Ibsen wants to teach.

When Ibsen leaving his earlier manner turned social critic, the problem of the lie appeared to him as the problem in discussing which all social questions could be brought in. The modern society is gangrened by lies. All our institutions repose on lies, provisional truths that have served their time and have ceased to be truths. A society based on lies makes the members of such a society liars. Hence characters like Consul Bernick whose social position is based on a huge edifice of lies which crumbles down finally. The duty of the *elite* is to proclaim the truth, cost what it might.

May a lie in certain circumstances be legitimate? May not a widow safeguard the memory of her husband, so that the son need not hang down his head in shame before the world? Ibsen would not tolerate even such pious lies on any account. There is no saying that lies told with the best of intentions attain their object. Therefrom result evils greater than the evils they were meant to avoid. What evil is caused by the marital lie is illustrated in *the Pillars of Society* and in *Ghosts*,

Later Ibsen's attitude against lies seems less uncompromising. A more attentive and prolonged study of men and of their social relations seems to have brought him to a less dogmatic and more indulgent treatment of the subject. Beginning as *Alciste* he ends as *Philinte*. The final impression left on readers of Ibsen is one of anguish and doubt in the presence of the unequal combat of man and destiny. *Lie envelopes us. Lie is in us. Lie is ourselves.* We breathe it as we breathe the air charged with bacilli. If we want to breathe the purer air of the high mountains, our lungs protest against the change.

#### MR. J. P. MORGAN AND HIS WORK.

Writing in the June number of the *Cosmopolitan*, Mr. E. C. Machen appeals to Mr. Morgan to use his influence and power of wealth for financial and business consolidations. Most of our readers are aware that Mr. Morgan is one of the most notable financiers and organisers that the modern business world has produced. He is an American, compounded, too, of the sturdiest and most democratic New England and New York stock. Before entering into a summary of the present article, it may interest our readers to read the following testimony of one whose opinions seem to be the result of no special intimacy with the well-known financier, but that of intelligent observation:—

John Pierpont Morgan dominates individually—a thing that cannot be said of either Rockefeller or Carnegie, however great their moneyed influence or mental power has been or may continue to be. The Rothschilds shroud their influence to-day with a deliberate avoidance of direct individual action. As financial persons they are almost impossible of access to the world's eye; as social forces they deliberately confine themselves to the limited region of class and privilege wherein their vast wealth and intellectual growth have given them a slow entrance and a respectable eminence. Mr. Morgan is essentially American and therefore personally democratic—the reverse of all that veils the Rothschilds. He is exclusive only from the force of business conditions and their restraints on speech and action. His immediate horror is not the people but the speculators.

#### Lower down we read:—

A sturdy man, then, is this bank "king," who is willing to be "citizen" Morgan. His face has a mind behind it. The strong jaw has something perhaps of the iron set and clinch that befits the treasure-vault. It is a resolute face, marked with the bull-dog quality, but it has the sagacious directness of the kindly mastiff also. The eyes are keen, even piercing; the chin is square; the forehead possesses a full curvedness. There is autocracy and drive enough in the strong neck, the sway of the broad shoulders, the poise of the big-set head, which is yet trustful in repose. This man masters, but does not mean to oppress. He compels obedience, because he can do the thinking needed. There are no details in the myriad operations that centre around him that he does not understand and would not, if needed, undertake. If he



has limits, it is in the direction of doing too much and trusting too little.

The history of the industrial growth of the United States and the country's increase of wealth through the development of natural resources and the economic agencies which have left its growing millions the spur and lash of industrial ambition, the obstruction of which results in conflict and competition, and the paramount idea that the making of wealth is the insurance of civilization, and the consequent conviction that the security of wealth is also the safety of industry,—all these make it necessary that a big personal factor as Mr. Morgan shall be the chief agent of harmony between capital and labor:—

Organized labor is not the enemy of capital, corporate or individual. In truth, labor, being creative or preservative in its grain, is of conservative disposition. Its margins are too narrow for willing conflicts. Under prevailing conditions it must be found willing to compromise, if met face to face. And there is never an employer but knows that it is the meanest man in his line that proposes to cut wages or breed a row by arrogance of manner and act. Moreover, labor wins in the long run, though the laborer often falls in the fight. Defeat with the laborers often costs life and hunger, and always with the employer it costs capital and credit. It is cheaper to starve than lose money.

Financiers who, like Morgan, manage the employers rather than the employed, can estimate this cost and will have no pride in avoiding the loss by insuring co-operation.

The defeat of competition by consolidation is designed automatically to grind out unneeded middlemen and crush the dangerous speculator. The brokers alike of pit and curbstone are more to be dreaded than labor leaders or those who follow them.

Panics are more disastrous than strikes, and inflations are worse than lock-outs. Labor is reasonable and wants only fair treatment. The greed of gain—won, too, with honest toil—is more deadly to business security than the breath of the upas-tree could be to the traveller sleeping beneath its branches. The day of large operations compels both consolidation and conservation. Competition is the conflict of small business. It has never won but one thing for civilization, and that was a place for struggle. The holding has been done by co-operation. Just now in the business world, it is achieved through the form we call consolidation—the name for its selfish side. In the world of labor it is gained by organization. The two forms are the constables of security.

No one who thinks can deny that labor grows in its organised capacity and range. Middlemen when driven out will be forced in a large degree into its ranks. They will bring what it now lacks most—"administrative skill and trained knowledge of credit and its capabilities." And

*somewhere and somehow, the American who has such power and skill, denied advancement by consolidations in the capitalist realm, will find an aggressive peace in the Republic of Labor.* The life of every healthy workman is valued by statisticians at five thousand dollars for productive purposes alone. Capitalize this into credit under co-operative direction and the road to control will be swift-

ly won. The small trader, the shrewd vendor, the keen witted office-man, the sharp commission merchant or broker, whose services consolidation dispenses with, will find a way by organization to realize place on planes other than mere traffic. *They will above all, and at once, proceed to create fresh sources of property and remould industrial power.*

It is known that abundance of coal and iron remains untouched in the west and south west of Africa, that fertile lands are still idle, that timber is available and unused waters offer power. They can be won "without wars" and benefit all the people. In a recent number of the *Cosmopolitan* a writer writing upon financial and business consolidations closed with the inquiry "What is the meaning of money after it has reached a few millions? The writer added," "It has no significance to its owner." Perhaps not, but that *power* is the modern attribute of enormous wealth is true. It is this *power* that Mr. Morgan will recognise and be swift to utilise for the benefit of the people.

#### THE DEMISE OF THE CROWN.

Mr. Percy Pain discusses in the columns of the *Law Magazine and Review* the reasons for holding that the officers of the Crown should be re-appointed on the death of a sovereign. He traces in a very well-written article the history of the Law on the subject. The succession to the Crown Act, 1707, enacted that the Parliament in being should continue for six months after the demise of the Crown, and that if at the death of Her Majesty, her heirs or successors, there should be a Parliament in being, but adjourned or prorogued, "such Parliament shall immediately after such demise meet, convene and sit, and shall act notwithstanding such death or demise," while by Stat. 30 and 31 Vic. C. 102 s. 51, notwithstanding anything in the Stat. 6, Ann. C. 41, "the Parliament in being at any future demise of the Crown shall not be determined or dissolved by such demise, but shall continue so long as it would have been continued but for such demise, unless sooner prorogued or dissolved by the Crown."

With regard to the holders of office and commissions under the Crown the Succession to the Crown Act, 1707, provides by section 8 that the Privy Council shall on the death or demise of Her Majesty not be dissolved, but shall continue to act for six months unless determined by the next successor, nor shall the offices of Lord Chancellor, Treasurer, President of the Council, Privy Seal, High Admiral, or any of the great offices of the Queen's household, nor any office, place, or employment *civil or military* within the British Islands or any of Her Majesty's plantations become void by such demise, but the holders of any such offices, shall continue to hold the same for six months (eighteen months in the Colonies) after such death or demise unless sooner removed.



Under section 6 of the same Act any person already chosen a member of Parliament (not being an officer in the army or navy accepting a commission, who accepts any office from the Crown is made to vacate his seat thereby. But the Demise of the Crown Bill introduced by the Attorney-General in the present Parliament and which passed the second reading in April, proposes to render re-appointment to any office, civil or military, under the Crown, entirely unnecessary and if this Bill be comes law, the paid ministers of the Crown will not have to be re-appointed and consequently there will be no room for the contention that by re-appointment they have ceased to be members of the House of Commons.

The Commissions of the Judges are continued on the demise of the Crown by Stat. 1. Geo. III., c. 23, and although the office of a Justice of the Peace is determinable by the demise of the Crown under the Justices Qualifications Act, 1760, if the Justice is put in the Commission by the succeeding sovereign, he is not obliged to sue out a new *dedimus* or to swear his qualifications afresh. The question as to the necessity for re-election in the case of members of Parliament for Ireland, Scotland and the Universities upon the demise of the Crown appears to have arisen in this way:—

By the Reform and Redistribution Act of 1867, S 51, it is provided that the Parliament in being at any future demise of the Crown shall not be determined or dissolved by such demise, but shall continue so long as it would have continued but for such demise, unless it shall be sooner prorogued or dissolved by the Crown notwithstanding anything in the succession to the Crown Act, 1707, contained. But section 2 of the 1867, Act excludes Scotland, Ireland, and the Universities from its operation. If this section 2 has the effect of preventing section 52 being operative in the case of Scotch, Irish and University Members then apparently they continue members under the Act of 1707 for six months after the Crown's demise unless Parliament is sooner prorogued or dissolved. By the Union with Ireland Act, 1800. Article 3:—"The said United Kingdom be represented in one and the same Parliament to be styled the Parliament of the United Kingdom of Great Britain and Ireland."

Again by the Union with Scotland Act, 1706, the United Kingdom is to be represented by one Parliament. Hence it is argued--

That there is but one Imperial Parliament for the United Kingdom although its Members represent different portions of that Kingdom, and that is "the Parliament" referred to in, and governed as to its continuance on the demise of the Crown by section 51 of the Act of 1867 referred to above. Furthermore it was contended by those who assert no election to have been necessitated by the demise of the Crown that there cannot be a dissolution of the "Parliament" partial only as to Scotland or Ireland.

#### WILL THE NEW WORLD BUY UP THE OLD.

Mr. Stead has given us an entertaining article upon this all-absorbing subject in the June number of the *Review of Reviews*. He has thrown interesting side-lights upon the much-feared international trade conflict between England and America. It is cheering to see that, unlike some journalists at home, Mr. Stead sees nothing monstrous in the industrial rivalry of the America. That Americans have shown smartness for business considerably superior to that of Englishmen has been long established and the fear of the former slowly and sedulously aiming to control the carrying trade of the world has made many Englishmen uneasy. But the latest event which set all men talking was the purchase of the Leyland line of steamships by Mr. J. P. Morgan.

The Leyland steamers are one of the largest fleets of the British mercantile marine. The shares in the Leyland Company were quoted at £ 12 10s. Mr. Pierpont Morgan having set his mind upon controlling one of the great Atlantic ferries, in order to use it as a feeder and a servant for his Consolidated Railways, offered to buy a preponderating interest in the stock at £ 14 10s. or £ 2 per share higher than the current price of the stock. He thereby acquired control of a first class assortment of second-hand steamers. Some of them—including those engaged in trading to the Mediterranean and Portugal, and between Montreal and Antwerp—he resold immediately to Mr. Ellerman, the former controller of the destinies of the Leyland line. One of the conditions of the bargain was that Mr. Ellerman for the next fourteen years bound himself to take no part in managing or directing any line of steamships across the Atlantic. To rule Mr. Ellerman out of the competition was possibly as important as to secure the immediate control of ready-made fleet.

In this connection it is of importance to know how international commerce is carried on. Nations do not pay for their purchases in gold. They exchange goods and specie is employed only to balance up the accounts. Supposing that the United States export to England goods valued at £ 100, 000 000 sterling in excess of the value of British goods exported to the United States, this represents two things: first, the interest upon British capital invested in the United States and secondly, freight and profit.

The balance of trade which the Americans exultantly declare is so much in their favor, is in reality but a payment of tribute to the great creditor nation of the world. Sir Robert Giffen's figures seem to show that there is no diminution of the volume of British capital invested in the United States. At one time there seemed some ground for the suggestion that the enormous excess of American imports into this country represented the paying-off of American debts, the return on capital which we had in previous years invested in American railways and other industries; but according to Sir Robert Giffen the increase of the annual assessments of the income tax, amounting to 20 per cent, or £ 128,000,000 in ten years

does not imply that our investments abroad have been diminished.

But how long can this go on? If American capital goes over to England to be invested in British enterprises, the interest upon that capital will have to be remitted to the United States. Further, the Americans do not look up to England for anything they want for themselves and the method of barter is not, therefore, open to England. What then can this country give to the Americans in exchange for their goods? Mr. Stead says:—

It is nonsense to say that we have to pay for it in gold, because there is not gold enough in the country for any such purpose, and the question which puzzles some people is how much longer it will be possible for business to be carried on between a country which has more than enough of everything that it wants and another country which has nothing which it can sell in the American market. To this there is one answer, and a very unpleasant one—to wit, that although the Americans may no longer take our steel or our copper or our coals, they will buy up England itself—or rather, to use the phrase, they will pick out the eyes of England and take them in exchange for their superabundance of natural commodities. Already we see this process going on in the purchases of the famous country seats in the old country by wealthy Americans.

However, English manufacturers have had as much business as they could do and there is probably a grain of truth in the contention that they cannot fulfil the orders they have already received. What is required in any nation wishing to maintain its position in the markets of the world is energy and enterprise and, let us also add, intelligence. Mr. Stead, therefore, warns England against any suicidal policy to stem the tendency of American business activity: He says:—

There is no need to be a fanatic in favour of Free Trade in order to show that England, which has been for half a century the foremost Power of the world, competing successfully in every market, triumphing over all the protective tariffs that have been used to shut out her goods, could not possibly admit that she was unable, without Protection, to hold her own in the home market, without proclaiming her abdication before the world. What we have to hope is that under the double stimulus of the strain of the South African War and the sharp menace of American and German competition, John Bull may pull himself together before it is too late.

The nineteenth century is the age of steam, and England was the first Power to discover the possibility of harnessing steam to the service of mankind. The twentieth century promises to be a century of electricity and England cannot compete with America in electrical science. To one like Mr. Stead who has grown sick of the military spirit, there is something advantageous in the war trade:—

As long as the steam-engine held the field, we had no difficulty in holding our own; but now that Uncle Sam has got on the trolley car, it seems probable he will get

in ahead all right. At the same time, while we may deplore the loss of pride of place previously enjoyed by our country, we only need to examine each of these instances of American competition better in detail to perceive that while our rivals are beating us, they are really conferring the greatest possible advantage upon the individual citizen. That is indeed the great advantage of industrial as opposed to military rivalry.

The hope is, however, expressed, which is also the moral, that while accepting American goods, English manufacturers will bestir themselves, lest they should be badly left.

#### KANTISM AND THE VEDANTA.

The *Brahmavadin* for June contains an interesting article on Kantism and the Vedanta, comparing and contrasting the metaphysics of Kant, the great German philosopher, with the speculations of the Vedantic philosophers of ancient India. It is pointed out that the one essential difference between the Vedanta and every other system of philosophical speculation, whether ancient or modern, monistic or dualistic, is the difference of standpoints from which the totality of existence is viewed for purposes of philosophical enquiry. From the nature of things there are two points of view and only two on which metaphysical enquiries can be based. They are the standpoints of being and knowing, of the noumenon and the phenomenon, of the permanent and the changing, or in the language of the Hindu philosophers, the *Pāramārthika* and *Vyāvaharika* standpoints. Both of them are based on the intrinsic constitution of things and are equally real. Nor do they exclude each other, being the natural and complementary aspects of the same reality. They have their verification in the one reality which results from a synthesis of both of them. Any attempt at their unification by getting rid of either or both, or by regarding one of them as unreal and illusory and the other as real is absurd and illogical. All the different systems of philosophy have risen from such futile attempts. Kant's metaphysical speculations set up an impassable gulf between the noumenon and the phenomenon. He agrees with Locke and Hume that our knowledge is confined to the sphere of the phenomena and that whatever is beyond the limits of experience is unknowable. He overthrows all the fundamental positions of rational theology by reducing to nought all the time-honoured proofs for the existence of God and arrives at the conclusion that the noumenon or the thing-in-itself is absolutely unknowable by the speculative reason. This divorce of the noumenon from the phenomenon lands him in a scepticism which sees no objective significance in the three rational ideas of the Ego, of the Universe, and of God, being only the regulative rather than constitu-

ent principles of knowledge. The Vedanta, on the other hand, recognises the necessity as well as the inseparability of the two standpoints of metaphysical speculation—the standpoints of knowing and being, the Paramarthika and Vyavaharika, and declares that the actual or the real is in the synthesis of what flows from both these standpoints. The chief defect of the Kantian system is the unnatural separation of the thing-in-itself completely from the plane of actual experience. On the contrary, the Vedanta, accepting the Kantian thing-in-itself under the name of *Nirguna Brahman* brings it within the plane of experience and recognises in it the conception of *sat* (pure existence), which has all other things as its attributes or relations. The Brahman and the world are the substantive and attributive sides of Being which together form the totality of things known as the Universe, so that the essence of the Universe is the Brahman. The speculative philosophy of the Vedanta is not opposed to its religion. The speculative aspect thereof looks at things from the standpoint of being and regards the Universe as an essential unity. On the other hand the Vedantic religion looks at the Universe from the standpoint of the actual and concludes that it is constituted of three permanent realities which exist together as a unity. The article is on the whole very thoughtful and well worth perusal. The writer has dealt with the subject from the standpoint of Ramanuja's qualified dualism and has not sufficiently brought out the deep affinities subsisting between Kant's philosophy and the higher forms of the monistic Vedanta as developed by Sankara.

#### THE MOST HUMANE OF ARMIES.

A good deal has appeared criticising the conduct of the war in South Africa and the inhumanity of the British soldier, which, if true would be a terrible stain upon the honor of the British Army. But the record of the British soldiers' career will be considered clean and free from rapine and most patriotic and humane, after a perusal of a paper on "The Most Humane of Armies" in the June number of the *United Service Magazine* by Mr. Philip Young late Dean of Nassau. 'The British Soldier' to quote from a translation of a proclamation by Steyn and De Wet, has not hesitated—contrary to the recognised rules of warfare and contrary to his solemn agreement at the Hague—to arrest neutrals and deport them, to send out marauding bands to plunder, burn and damage the burgher's private property. He has armed Kaffirs and natives and made use of them against us in war. He has been continuously kept busy capturing women and children, old and

sickly men. Many women's deaths have been occasioned because the so-called Christian enemy had no consideration for women on a sick-bed or whose state of health should have protected them against rough treatment. Honorable women and tender children have not only been treated roughly but also in an insulting manner by the soldiers by order of their officers. Moreover, old mothers and women have been dishonoured—even wives and children."

Our author denies that such reports are true in any particular. He quotes M. Constaucon, ex-Swiss Consul at Pretoria, who writing in reference to an article on "Crimes" says:—

Nowhere and in no instance have I heard a single word of complaint against the troops. The women could not say enough in praise of the soldiers and their behaviour towards their sex. Women, rich and poor, have been everywhere treated as ladies. Why the Boer women were so unanimous in their praises is because they were far from expecting such treatment at the hands of the victors. Paul Kruger himself has shown how much he trusted his victors, by leaving his old wife in their hands."

To this is also added the testimony of the Presbyterian Minister of Pretoria, the Rev. James Gray. "Having lived," he says, "in Pretoria for the last eleven years, I am acquainted with many of the local Boers. Those of them whom I questioned, assured me that they had never known a case in which British soldiers had outraged a woman. One case was rumoured, but had never been substantiated and was regarded as very doubtful."

Mr. Young thus makes it clear that the great desire of England was that the war should be waged with all humility. Nor has the Imperial Army failed in its high trust. Great influences seem to be at work, which it would be difficult to note here. Perhaps the most conspicuous may be mentioned:—

1. A strong public opinion permeated by Christian principle.
2. Queen Victoria's noble, sympathetic, kindly nature—soldier-loving and by soldiers loved.
3. The magic power of the great commander's name—

In the world of conflicts humanity has never been the distinguishing feature. The passions of contending peoples roused by inhuman acts on either side gather in intensity and flash on with incredible rapidity from regiment to regiment till a whole army is ablaze and infected with the barbaric lust for death. But if, under such circumstances, it has been possible to display humanity, then one may agree with the author that "altogether it has been a sublime spectacle—this Empire's Army in the field" that they behaved like "heroes in the field and gentlemen at all times."

## THE PSYCHOLOGY OF THE PRINTED PAGE.

In the June number of the *Cosmopolitan*, Mr. Harry Thurston Peck gives a very instructive analysis of the elementary principles that professional writers and makers of literature should remember with care. The external form in which their thoughts, narratives and their descriptions are laid before the public is of very great value. It is quite possible to print an interesting book in such a way that at first sight it shall seem to be a dull one and to print a dull book in such a manner that at first sight it shall seem interesting. This is in a large measure due to the way in which the typography of the book is attended to. As in the case of the individual, so in the case of a printed page, external polish in addition to internal merit would be better. The first step toward making a printed page take an interesting look is Variety :—

A solid unbroken mass of words is of all things the most repellent to the person who takes up a volume and looks it over; for here solidity of appearance is taken as synonymous with heaviness and even dullness of content. This effect is largely eliminated and the page noticeably lightened as soon as it is judiciously paragraphed. We then feel that our author is not wearily pursuing a single train of thought, but that he possesses the mental mobility which allows him to shift his ground before he becomes monotonous. The division into paragraphs, however, should be very carefully made, and not in any arbitrary fashion; since the perfect paragraph contains the development of a single idea, and it ought not to end until that development has been fully rounded out.

Variety and lightness are still further gained by the judicious use of capital letters, of italics, of quotation marks and sometimes, though sparingly, of a line or two of verse which requires the use of a smaller type. This principle, namely, of Variety is controlled and limited by that of Fitness which, in doing so, subserves the economy of attention.

The essence of fitness is "good taste and a sensitive appreciation of what is allowable. For while variety is always to be sought, it must be discreetly sought and in a way that will gently stimulate the attention and not distract it." For example in the use of capital letters apart from proper names in the strictest definition of that term, there are many words regarding which diversity prevails. Shall we capitalize such titles as "Czar Mikado" "King"? Yes, when they relate to a specific

czar, mikado or king but not when they are otherwise employed :—

As to the use of inverted commas or quotation-marks the writer cites a passage written by him on this subject a year or two ago :—

Apart from their principal function of indicating actual quotations of what someone else has said, quotation-marks may be made to serve two distinct purposes. The first is the purpose of indicating that the writer has used a word or a phrase that is a little unusual and of showing that he is perfectly aware of the fact. The unusual word or phrase may be one that has just come into use and is not yet generally known; or it may embody an allusion that is a little abstruse; or it may perhaps be just a bit undignified. In the first two instances the quotation-marks mean that the writer desires to avoid the responsibility of the quoted words; in the third instance they explain that he is well aware that he is unbending a little too much and wishes to have it known that he does not usually employ that sort of diction. In all these cases they convey a tacit apology. Now the literary amateur shows his amateurishness by not knowing precisely what words and phrases fall under these several heads. If he is the editor of a county newspaper, he will write (with quotation-marks) of "the wee sma' hours" in which the surprise party to the village pastor terminated; and he will describe the local tavern-keeper as "our genial host. If he is a somewhat less rudimentary person, he will perhaps quote such expressions as "survival of the fittest" and "new woman" and "fin de siecle," and "epoch-making." To say that a thing is epoch-making is, of course, entirely proper; but an experienced writer knows that all cultivated men and women are now perfectly familiar with this importation from the German, and so he would not dream of setting it off by quotation-marks, since it is already naturalized in our every-day vocabulary.

The second use of quotation-marks is to convey a sort of contempt when one employs an expression which is rather usual and by amateurs regarded as allowable, but which the professional person wishes to discredit. Such are the words "brainy," "talented," "locate" and a host of others. Mr. E. L. Godkin is a master of the art of making a current phrase ridiculous by this typographical device. Such political expressions as "point with pride," "jamming it through," "visiting statesmen," "something equally as good" and "a friend to silver" have been so pilloried by him in this way that only an amateur can now ever dream of using them with any serious intent.

Side by side also with other typographical matters is the question of Punctuation which has an important share in aiding the perfect utterance of recorded thought. It is a device to make the writer's meaning unmistakable and as such cannot be left to the compositor or to the proof-reader. To sum up. The arrangement, the typographical system and the punctuation of the printed page, if attended to with discrimination may do very much for the author and his book. This is, in the main, the substance of the article on the above subject.

But what about the manuscript? If there are rules for the psychology of the printed page, as there are rules for painting and rules for elocution, which cannot be ignored, a great deal of stress can be laid upon the psychology of the manuscript, not to speak of the type-written copy. In reading a manuscript, the mind cannot possibly concentrate its whole attention on the only things that really count. First of all, some little time is necessary to adjust one's eye to the ordinary peculiarities of the writing; this at the outset divides attention and the infliction is enhanced on account of a disregard of the principles which underlie the psychology of the printed page and which are equally important in the case of manuscripts.

#### SHRI KRISHNA.

This is the subject of the fourth in the series of articles by Mrs. Annie Besant in the *Central Hindu College Magazine*, under the heading "In Defence of Hinduism." Mrs. Besant begins by observing that those who most attract the human heart in love are usually those who are also most hated, and there is perhaps no more striking example of this than Krishna, the blessed. How He was adored when He lived on earth as child and man, by His parents, by Gopas and Gopis, and the Pandavas; how He was hated by Kamsa, and Shishupala, and Duryodhana? And what name has been dearer than His, since His time to myriads of human hearts in India, to old and young, to men and women? And what name has been more blasphemed and outraged by the ignorant and the foolish, during late years when spirituality has been fading away?

The Western Shri Krishna, the Blessed Christ, had much the same fate during His life on earth and since; His mother and His disciples, and several gentle and loving women adored Him, but the leaders of the people hated Him so much that they murdered Him. And since then myriads have loved Him better than any one on earth while others have hated him and have called Him very foul names.

The writer then proceeds to point out the striking points of resemblance between these two Divine Teachers of the East and the West, the Hindu and the Hebrew, as told in Their histories.

Christ was, of course, Himself an Eastern, but His teaching has spread chiefly over the West; He was sent specially for the benefit of the Western nations, the eastern having already had their Divine Teachers, from whom they had learned the same things as the Western nations learned from Christ. The Hindus had had Manu, and Rama Chandra and Shri Krishna, and quite a crowd of Rishis, who had told them a great deal more than they are able to practise, and told it in such beautiful words, that no later teacher has been able to improve on them. The Chinese had had Lao-tze, a Teacher wonderful in His deep wisdom and all-embracing tenderness, and also—with the Japanese, and Siamese, and Burmese, and Sinhaiese, and Tibetans—had sat at the feet of that marvel of wisdom and compassion, the Lord Buddha, and needed no other spiritual Guide. The Persians had had Zarathustra, son of the Fire, and required no other Illuminator. But the young world of the West needed a Divine Man to instruct it, and that man was sent in Christ.

The followers of all these great and holy Teachers ought to love each other as brothers, as do the Teachers Themselves; but alas! human love, until it becomes spiritualized, is very jealous and exclusive, and wants to make its own object unique, standing alone, high above all others and approached by none. And so the worshipper of Shri Krishna feels a great contempt for other peoples, and calls them Mechas; and the worshipper of the Lord Buddha says there are no Holy Ones outside the Sangha; and the Christian says that no one can be saved without his Christ; and the followers of the great and holy Prophet Muhammad, sent to Arabia and Syria in later days, are no whit behind the adherents of older religions in pride, but call them all "unbelieving dogs." Thus "they bite and devour one another," and use the blessed Names as bullets to pierce human hearts. As the religion of the Hindus is the oldest, Hindus should set the good example of love and respect for others, and no Hindu boy should ever allow himself to use contemptuous terms applied to people of other creeds and races. A man's greatness is shewn by the breadth of his love, and not by the height of his pride.

It is said above that there are many striking points of resemblance between Shri Krishna and the Blessed Christ as told in Their biographies. Mrs. Besant explains the reason for this.

The lives of the Holy Ones are not as the lives of common men; the events of Their lives have a universal meaning, shewing out facts in external nature and in the evolution of the human soul, which are always and everywhere true. And when wise men write Their lives, they bring out especially the more important of these facts, and they often lay more stress on the universal truth than an action was meant to teach than on the actual details of the action; and this confuses unspiritual and ignorant readers in later times, so that they blaspheme the Blessed Ones for the very actions that are most full of deep instruction. Both Shri Krishna and the Blessed Christ have suffered much in this way.

Now for some of the points of resemblance.

Both had mothers remarkable for purity and deep piety who suffered ill-usage for the sake of the unborn Child, but were protected by celestial interference. The birth of both was foretold, and the king of the land in which each was born tried in vain to murder the Divine Child. Both

were very wise as Children. Both became Teachers of sublime morality as Men. Both restored to life one apparently dead, in each case "the only son of his mother and she was a widow," and performed many other so-called "miracles," such as feeding a great crowd with a few scraps of food. Both washed the feet of men in sweet humility. The life of both ended in apparent disaster and gloom. Both rose triumphantly "into heaven," after the physical death. In fact, the outline of the story, as told in the sacred books, is the same.

Though Shri Krishna came into the world long before the Blessed Christ, Mrs. Besant warns us against the common mistake of thinking that the later Christian story was copied from the earlier Hindu one. These great Beings live out the same story, modified by the needs and conditions of Their time on earth, but They do not copy from each other, any more than two painters who paint the same mountain copy each other's pictures.

One matter which is made a subject of attack on Shri Krishna is His relations with the Gopis, and many bitter things are said on this score. To this the learned writer gives some superficial answers, and also a deep one. Let us take the superficial ones first.

Shri Krishna had many bitter enemies during his life on earth, who assailed Him with unmeasured violence, and brought many charges against Him, but none accused Him of immoral relations with women. Shishupala is a striking instance of this. In his vehement tirade against Shri Krishna, in which he ranges over His life, "defaming and polluting," he does not accuse Him of any crime of his kind. It is obvious that if His contemporaries condemned His relations with the Gopis, His enemies would have made this a chief and most effective charge against Him.

Some think, as no such charge is made, that the Rasa Lila cannot have occurred, but is a fanciful modern addition to the story. Or, that the writer of the *Bhagavata Purana*, wishing to depict Shri Krishna as the Lover of men's souls, told this story as an allegory only, and that it came to be taken as history. Others say that, as Shri Krishna was God, the Gopis were His creatures, and belonged to Him more than to their husbands; but this answer lies open to the retort, that if God appears as man, He would not undermine by example the very laws of purity that He has laid down by precept.

Mrs. Besant agrees with these, that the Rasa

Lila did take place, but that the circumstances were well-known, and were such as to raise no moral objection; that is, that Shri Krishna was a young child, with whom no improper relations could occur, and with respect to whom any such sexual idea was obviously and patently absurd.

It is objected to this that the language *Shrimad Bhagavata* is the warm and glowing language of sexual passion. But this proves nothing. The language belongs to the writer, and if the deep answer that I am going to make be true, we shall understand that the writer would use the warmest terms to express the exuberant love he desired to depict. In all ages and all religions, men have used these terms—the warmest that human language supplies—to describe the relation symbolised in the Lila. A striking example of this is given in the 'Song of Solomon' in the Christian Bible in which the language is far more glowing and detailed than in the *Bhagavata Purana*. Men in modern times may question whether such language is wise: but that it has ever been used, without any intention of conveying impure ideas in this connexion, is a fact beyond dispute.

Another answer is that the Lila did not take place on the physical plane at all, as it is distinctly stated that the Gopas thought that their wives were with them all the time. But this answer is not satisfactory, as it is said in the text that this idea was the result of Shri Krishna's "maya," the implication being that the Gopis themselves were with Him, and the husbands deluded, hypnotised.

The true answer is that Sri Krishna, as an Avatara, taught by His actions various great truths, and among these was the intense and single-minded devotion that the human soul should feel to God, abandoning all else if it conflict with love to Him. All human loves are but means to the supreme love: they cannot obstruct and overbear it. The love-relation between man and woman has ever been recognised, and is, the early image of the love of God and the soul, and the self-surrender of the woman is the type of the self-surrender of the soul. Sri Krishna was to teach this, and in order to teach it with least possible objection, He taught it while He was Himself a child, and with persons who were no ordinary women but who were, with their husbands as the story says, God-like persons—devotees of His own in the past, born as women to shew out their devotion to Him with all the passion women lavish on an idolised child. The praises sung by Gopas and Gopis alike shew that they recognised in Him an embodiment of the Great Lord, manifesting His power in superhuman actions. These saints of old, now embodied as women, seek the gracious child, and He teaches them first by eluding them, by disappearance, that the soul must love in the absence as in presence of its Lord. Then He re-appears, and He multiplies Himself, so that He stands between each pair of Gopis, to typify that God gives Himself wholly to each soul that loves Him, and that the soul possesses Him as utterly as though it existed alone in the universe save for Him.

This is the picture drawn in *Shrimad Bhagavata*, and if, in describing it, the writer runs into exuberance of language, striving to describe the rapt ecstasy of utter union between the soul and God,

he might well fail to foresee that the picture of the Divine child thus multiplied to the number of His devotees could be degraded by the coarseness of modern days into the lascivious adulterer, violating the homes of his friends.

If the story be taken as true at all it must be taken as a whole, the Chief Actor must not be taken as a man but as a child, not as an ordinary child, but as one able to multiply himself at will; and the remaining actors must be taken as re-incarnated Rishis, beyond human passions. To take away these super-human facts, and to represent Shri Krishna as an ordinary man drawing away His friends' ordinary wives, is to perversely choose out of a coherent story the parts which may serve as weapons to assail, and to ignore the rest. The story is an allegory, acted out on the physical plane.

Regarding the other story objected to, of His taking the clothes of the Gopis and forcing them to come to fetch them, Mrs. Beasant opines that it is an ancient allegory of Initiation, and was acted when he was about five years old—an age that does not allow much room for indecent ideas. It typifies the fact that a time comes to all who seek the Supreme, when they must be stripped of all if they would find Him.

As a great Christian mystic put it: "The naked soul must follow the naked Jesus." The worldly man may object to the story as much as he would object to the renunciation it typifies, but those who hope to rise to the renunciation will feel the beauty and truth of the narrative.

Perhaps the truth of a verse in the Christian Bible has never been better verified than in the case of the detractors of Shri Krishna: "The natural man receiveth not the things of the spirit of God: for they are foolishness unto him: neither can he know them, because they are spiritually discerned." Therefore must the science of the spirit ever remain a Gupta Vidyā to the world, but there ever will be some who understand.

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*All contributions, books for review, should be addressed to MR. G. A. NATESAN, Editor, Indian Review, Esplanade Madras.*

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## DEPARTMENTAL NOTES.

### Educational.

(By a Headmaster.)

#### ENGLISH LITERATURE IN SCHOOLS.

Our English educational exchanges for June devote much space to the subject of English teaching in schools. The *School World* issue is a special "English" number, and its first article is from the pen of Mr. Barnett on 'English Literature, a Great Discipline'. The *Journal of Education* prints a remarkable address by Prof. A. S. Wilkins on "The Place of Literature in Education." The *American School Review* has in its issues of May and June no fewer than four contributions on English teaching and allied topics. This great attention paid to the subject appears to indicate a privailing sense of deficiency which cannot altogether be set down as morbid self-accusation on the part of those concerned.

#### THE AIMS OF ENGLISH TEACHING.

What should the teacher of English in the secondary forms aim at? Should his teaching be grammatical or literary? Should the pieces taught be chosen for their literary merit and emotional value, or for their being adapted to illustrate points of style, grammar, and rhetoric? A few hold the narrower view in theory, many, not so hasty perhaps, follow it in practice. Dr. Bain, who in his "On Teaching English" would appear to favor it, becomes himself the subject of a controversy, at the summing up of which he is dismissed as 'an emeritus professor who has won high distinction in other branches of science, but who would not be reckoned, by his most devoted friend and admirer, a judge of poetry.'

#### THE BEAU-IDEAL TEXT-BOOK.

Prof. Wilkins, condemning the linguistic teaching of selected extracts and snippets, is severe on the unfortunate Scotch doctor:—

I venture to disagree from the bottom of my heart with almost everything which Prof. Bain has written on the study of literature; but I don't know that I would protest more heartily against any of his *dieta* than when he says that he would not allow his pupils to read whole plays of Shakespeare, "because in the greatest of his plays there are long portions which do not yield any marked illustrations of either grammar or rhetoric." "The *beau-ideal* English text-book," he says, "as I conceive it, is a selec-

tion from the great writers, determined by capability of illustrating points in style, such as we need to be indoctrinated into before we commence reading on our own account." I have a happy confidence that every healthy schoolboy would reject this "*beau-ideal* text-book" with unmitigated loathing. Fancy cutting up "King Lear" into gobbets arranged under the categories of grammar; or still worse under the heads of indignation, gratitude, despair and natural analogies, and giving this as literature! I would sooner take a mutilated corpse from a dissecting room as an ideal of womanly beauty.

#### THE AMERICAN N. E. A.

In view of the Educational Conferences in Madras and elsewhere, it would be extremely useful and stimulating to quote *in extenso* the programme of the fortieth annual convention of the National Educational Association now being held at Detroit in Michigan. But the space at our disposal forbids it, and our readers must be content with a few particulars from a very striking and enormous programme published in the *Chicago School Review* for June. Besides a General Sessions of the whole association which takes place on July 9, 10, 11, and 12, there are meetings of no fewer than 16 departments. Each department meets more than twice, and there are papers, discussions, and what are called *Round-Table Conferences*. A novel feature in connection with the Department of kinder-garten education and child study is a *Parents' Conference* at which many distinguished teachers will be present and take part in the informal discussions. Superintendence, Art, Music, Indian Education, Manual Training, Business, Education of Deaf, Blind, and Feeble-minded,—these are some of the departments. Some interesting subjects are "A plea for the study of Educational Philosophy by Teachers of Science;" "What should be the percentage of Indian blood to entitle pupils to the rights of Government schools?"; The advisability of more all-round training for the Indian rather than an attempt to make of him a skilled machine;" "Why should the Government educate mixed bloods whose parents are abundantly able to pay for their education.?" Many great names and high designations figure in the list of speakers. The honored name of Hon. William T. Harris, Commissioner of Education for the United States, occurs as often as four times. The most lively interest seems to be displayed in the work of the Library Department. Mr. Carnegie's munificence to the public libraries of the States has apparently roused teachers to turn it to good account for the schools. An important feature of this department is the great part taken by ladies, who, as librarians as well as teachers, seem to bear more than half the burden of school education in America.

#### SCHOOL POETRY.

A writer in the *School World* for June recommends for use in schools a recent book entitled the *Laureate* edited by Mr. Richard Wilson and Mr. Edward Arnold. It seems to contain selections from forty-seven poets, and includes modern pieces from Swinburne, Huxley, Austin Dobson, Kipling and Newbolt. There is a piece from William Morris and also 'Rugby Chapel' by Mathew Arnold.

#### THE PURPOSES OF HISTORY TEACHING.

Prof. Withers has prepared a memorandum on the teaching of history in schools for the London School Board. At the end he thus sums up the purposes that history teaching ought to have in view :—

Among other results, such study of history should furnish pictures of human life connected with tales of human experience and types of human conduct in the chief epochs among the chief races of mankind, and thus provide ideas and to suggest and nourish feelings of human sympathy and admiration, which are of the greatest importance in forming the will and character of the child. History, too, should give some idea of the long and difficult process by which human civilisation has come to be what it is, and of the debt under which we lie to the great men of all nations.

#### GENERAL OR LOCAL HISTORY FIRST.

Mr. Childs pleads for a course of universal history in schools before the history of special periods or special nations is taken up. The ideal should be to give children connected views of national and universal history. Specialisation should come later. He contends that *rationality* the idea of a house precedes that of a chamber, and would extend the analogy to teaching. Stories for the child, connected views for boys and girls, and specialisation for the advanced student,—this is his order. In other words, in the secondary school the logical order is likewise the natural order of teaching history.

Mr. Davies, writing in the *School World*, supports the present practice of educationists. The logical and the natural orders do not agree, they seem to be opposed in this case.

It is natural that we should take an interest in local individuals and occurrences, before we concern ourselves with our national history; and that we should take an interest in the history of our own nation, before we trouble about the history of other nations. Moreover, the young mind delights not in historical generalities, but in those particular and personal details which the unfortunate teacher of universal history would be compelled to discard as irrelevant. It is for these reasons that we teach history, in its initial stage, by means of stories.



## AN INTERESTING INVESTIGATION.

E. J. S. contributes to the *Journal of Education* a curious paper on "What are the most difficult subjects to teach?" The writer gives the results of an investigation conducted on the examination results of a girls' school during five years. The analysis of the mark-lists must have been very laborious. 167 girls were examined, about 250 papers were set, and 1500 scripts were marked. The results are deduced on three different principles, (1) by average percentages (2) by proportion of unsuccessful scripts, and (3) by proportion of unsuccessful papers. The results in these cases agree generally, and the final average yields the following list of subjects arranged in the order of increasing difficulty: Dictation, Composition, Geography, Euclid (mainly book-work), Literature, Scripture, Science, French, German, English Grammar, Latin, History, Algebra, Arithmetic. This order agrees surprisingly with what one might frame on *a priori* considerations, the subjects appealing to the memory coming first, and those that appeal to the intelligence coming last.

## THE HIGHER AIMS OF ENGLISH TEACHING.

Three quotations will be made to show the great possibilities open to the teacher of English, which he must keep in his mind constantly and not lose sight of in the hurry of class-work or under the pressure of examination requirements.

"The aim of secondary instruction in English is to enable the pupil to write and speak with clearness, rigour, and grace, to acquaint him, at first hand, with a view of the best literary products of English and American thought to cultivate a sense of literary style, and to inculcate a love for the best literature."

"To be constantly dealing with the best and happiest thoughts of the best and happiest minds at their best and happiest moments; to be making these thoughts the habitual and permanent food of young natures just at the time when the intellectual tastes and habits are forming which are to determine their whole careers; to bring mind into closer contact with mind in the presence of whatever things are lovely and of good report...these are the duties and the rewards of the teacher of literature."

"Such a course of study [in literature] begun at school cannot fail to touch the springs of character and affect the emotions and the imagination. It may not brace the logical powers or store the mind with useful information; but education has many functions, and the discipline of the taste, the appreciation of perfect language, the contact with greatest interpreters of human feeling and aspiration, is no mean part of a liberal education, and will furnish in after years one of the best antidotes to the *ennui* of idleness, the mechanism of routine, and the exhaustion of overwork."

## A HEAVY BILL OF FARE.

While on this subject, another extract may be given, setting forth what the university of Califor-

nia requires of candidates for entrance into it. Contrast with this the attainments of our matriculate.

A knowledge of *grammar* that will be to the pupil a means of interpretation in his study of literature, and will enable him to criticise and correct his own composition; the treatment of the subject to be moreover "scientific, historical, comparative."

Those points of *rhetoric* which will furnish him with apparatus for investigation and criticism in his high-school work.

A *Word-Study* that will lead him to recognize the kinship of related words. A training that will enable him to gather all information concerning words that the dictionaries at hand may afford him, and a further training that will enable him to apply this information to a word in any given context "with a view to determine its precise value and force in that context."

Two *Shakesperian Dramas*—to be considered from the "historical, the technical, and the literary point of view."

About thirty poems—Lyrical, Narrative, Descriptive, Reflective—"approached not only from the imaginative but from the historical side." To be so studied as to develop the great facts of chronological sequence and relationship in English literature, the distinct types and schools of poetry and the characteristics of the great epochs and groups."

Addison's *Essays* and Macaulay's *Warren Hastings*. The work in the first to be centred upon "the striking aspects of character and society" as there presented. The second to be made valuable "as an introduction to the modern style of direct and emphatic narration and description, and as a stimulus to the study of character, morals, political problems, and history."

A study of *Classic Myths* necessitating about sixty lessons.

Three *Oration*s—to be studied first, along the line of "their treatment of great and far-reaching questions in the light of universal principles," and second, in their masterly handling of argument.

Two *Novels*—Tom Brown; the Newcomes, or Silas Marner and Vicar of Wakefield, or Henry Esmond—which must be known thoroughly and studied as works of art.

A training in *Composition* with the threefold object of securing good mechanical form, free expression of thought, vivid action of mental powers.

*The Maharatta*.—The Indian Review has already had a successful career for one full year; and it shows ever more and more signs of vigour. The plan of the *Review* will be evident from the long list of contributors which is given in the supplement. To give an idea of the pluck which Mr. Natesan possesses in drawing eminent contributors to his magazine, it is enough to say that the list includes well-known High Court Judges, Barristers, Advocate-Generals, eminent Professors, and the wonder of it all is, even eminent Indian Civil Servants. Another thing is that a large majority of these contributors are Englishmen. The *Review* is conducted strictly on business principles; and that is perhaps one of the most remarkable features about it.

**Legal.**

(By A High Court Vakil.)

**WHEN IS A WOMAN PAST THE AGE OF CHILD-BEARING ?**

Here is an interesting note (from the *Law Magazine and Review*) upon a recent case.

*In re White, White v. Edmond* (110 L. T. J. 357) is interesting with regard to the curious question of a woman's age. Courts of Equity will under certain circumstances draw a presumption as to whether a woman be of an age past child-bearing or not. Here a testator had bequeathed certain leaseholds to trustees upon trust to permit his daughter A. to receive the rents thereof for life and upon her death to stand possessed of the leaseholds in trust for all the children of A. who should live to attain the age of 21 years, and if more than one in equal shares as tenants in common absolutely. A who was born in 1844 and was married in 1866, had one son only. Her husband had died in 1890, and she had not been remarried. She and her son applied by originating summons for a declaration that they were between them absolutely entitled to the leaseholds, and that the trustee of the will might be ordered to assign the same to them. The Court (Buckley, J.) made the order asked for, presuming that A. was past child-bearing, she being more than 56 years of age.

**EARLY LAW IN BRITAIN.**

The *Canadian Law Times* draws attention to this question in its issue for May. It is to the great honor that the world is indebted to a description of the state of Law and of justice in the prehistoric days of great Britain. The quotations from its *Commentaries* show that the law-giver in old Gaul was the priest as in old India. No doubt it is pointed out "that the clergy was not a hereditary caste as is found in India." But the fact remains that all learning was in their hands as in India. As a natural result of this state of things, the people sought their aid in settling disputes: Julius Cæsar is astounded at the fact that the decision of these priests who had no more authority over the masses than that which their learning and piety gave them should have been so implicitly obeyed. In India centuries of foreign rule have not yet impaired the influence of the priests upon their congregations. In the good old days, sovereigns were afraid of doing injustice because of the priests. We would recommend to all students of law this interesting discussion in the *Law Times*.

**THE PRIVY COUNCIL AND THOSE THAT ARE ENTITLED TO PRACTISE BEFORE IT.**

A very interesting question has been raised regarding the rights of colonial advocates to appear and plead before the Judicial Committee of the Privy Council. The first point to be borne in mind is that a practitioner before the Privy Council is not expected to possess better qualifications

than those practising in the various High Courts. A barrister who has just been called to the bar can as well enrol himself for practice in a High Court as before the Judicial Committee. That being the case, it is naturally asked why practitioners entitled to similar privileges like the Barristers and who in a High Court will take equal rank with them should not have the right of appearing and arguing cases before the Privy Council. The matter is well discussed in the May number of the *Canadian Law Journal*. The question is one of considerable importance to the legal profession in this country. This is what the writer in the *Canadian Law Journal* says,

The English Bar Council was recently asked whether a colonial barrister, not a member of the English Bar, is entitled to practise in the Privy Council in any case coming from any colony, or only in a case coming from his own colony, and to this the reply was given: "They are not aware that any such case has arisen. It is doubtful whether the colonial barrister could demand the right to be heard in appeal not coming from his own colony, but it is improbable that he would be refused." It would appear from this somewhat delphic utterance that the English Bar Council regards the Privy Council as primarily a merely English Court in which the English Bar has an unquestioned right of audience in all cases coming before it; but the Council is obviously under the impression that colonial barristers stand on an entirely different footing, and have only a limited and restricted right of audience. For some purposes it is probably true that the Judicial Committee may be regarded as a merely local tribunal, e.g. as regards appeals from the English Ecclesiastical Court, but in regard to its appellate jurisdiction in civil cases, it cannot, we think, be properly regarded as a merely local tribunal; it is on the contrary an Imperial tribunal in the fullest sense of the term, and as regards that part of its jurisdiction the various Bars of all parts of the Empire must, one would think, stand on the same footing, and every barrister who is entitled to be heard there at all, cannot upon any sound principle as regards civil appeals, be excluded from audience in any case in which he may be retained; no matter what particular part of the globe the case may come from.

We are somewhat surprised that the English Bar Council should suggest that any narrower view of the matter is even arguable. If a colonial barrister were to be restricted to appeals from his own particular colony, on the same principle the English barrister should be restricted to appeals emanating from England. There is no more reason why any preference should be given in an Imperial tribunal to an English barrister than to a Canadian barrister, both are recognized barristers in the respective parts of the Empire in which they are called, and there is no more reason why, for instance, an Australian appeal, or a South African appeal, should be argued by an English barrister than by a Canadian.

**NUISANCE.**

According to a recent American decision the erection of a water-tank in a public street at a short distance from a church and also of a passenger railway station near by which causes a disturbance of the congregation by smoke offensive odours and cinders as well as by loud and incessant noises is

held to constitute a private nuisance for which compensation must be made or the nuisance removed.

#### HUSBAND AND WIFE.

An action by a wife against one who entices her husband from her and alienates his affections is held in *Dietzman vs. Mullin* (Kentucky), 50, L. R. A. 808, to be authorised by a statute which gives a wife the right to sue and be sued as a single woman.

#### A HABITUAL DRUNKARD.

An American lawyer thus defined a habitual drunkard in defending his client.

Not drunk is he who from the floor  
Can rise again and drink once more.  
But drunk is he who prostrate lies,  
And cannot either drink or rise.

The gravity of the court was somewhat upset by the citation which the lawyer delivered with mock-seriousness and elocutionary effect, but the judges were evidently not convinced that the precedent was sufficiently sound and reputable to deserve affirmation by the supreme judicial court of Massachusetts, inasmuch as a decision was forthwith handed down over-ruling the contentions of the counsel.

#### REFORM IN THE BOMBAY HIGH COURT.

The *Indian Spectator* writes with approval of the change introduced by the Chief Justice in doing away with the undesirable practice hitherto observed in our High Court, that only a Barrister Judge can sit as a Sessions Judge in the Original Side. Mr. Justice Chandavarkar, though a Pleader Judge, has been allowed to preside over the present Criminal Sessions, thus setting a precedent which, it is supposed, will be followed hereafter. It would appear that neither the late Mr. Justice Haridas, nor the late Mr. Justice Ranade ever presided over a Criminal Sessions, on account of both being Pleader Judges, which always seemed an odd practice. The present Chief Justice sees no reason why a Pleader Judge should not be allowed to preside over the Sessions, and the step that he has taken in departing from the usual old practice by nominating Mr. Justice Chandavarkar as a Sessions Judge this time will, therefore, be approved by all.

#### AGE OF JUDGES.

An arithmetical calculation on the figures provided by *Whittaker's Almanac* shows, says the *Daily Telegraph*, that the average age of a Law Lord is 68. The Lord Chancellor is 76, Lord Lindley is 72, Lord Macnaughten is 70, Lord Davey is 67, and Lord Robertson is 55. The average age of a Lord Justice, arrived at similarly, is something over 62. Rigby, L. J., is 67, the

Master of the Rolls is 65, Stirling, L. J., is 64, Vaughan Williams, L. J., is 62, Romer, L. J., is 60, and Collins, L. J., is 58. The Kings Bench Judge is a trifle younger than a Lord Justice. His average is not quite 62, Lord Alverstone, C. J., is 59, Mathew, J., is 70, Day, J., is 74, Wills, J., is 72, Gramtham, J., is 65, Lawrence, J., is 68, Wright, J., is 61, Bruce, J., is 66, Kennedy, J., is 54, Ridley, J., is 57. Bigham, J., is 60, Darling, J., is 51, Channell, J., is 62, and Philimore, J., and Bucknill, J., are 55. The Chancery Judge is a young thing of 59 Kekewich, J., heads the list at 68, Cozene-Hardy, J., is 62, Joyce, J., is a year younger, Byrne, J., is 56, and Buckley and Farwell, J.J., are 55 each.

#### LIABILITY OF RAILWAY COMPANIES.

On the question of the liability of Railway Companies, we would invite the attention of our readers to an important decision of the Privy Council. *The Irrawaddy Flotilla Company v. Bhagwan Dass* 1. L. R. 21 Cal. p. 610) which sets at rest the conflict of decisions between the Bombay and the Calcutta Courts. Of course in this case, their Lordships were not called upon to construe Act IX of 1890, but still their observations must command the weight and respect due to them. At the end of their judgment their Lordships observe, "the Act of 1872 was not intended to deal with the law relating to common carriers, and notwithstanding the generality of some expressions in the chapter on bailments, they think that common carriers are not within the Act." Section 72 of the present Railway Act distinctly provides that the responsibility of a Railway Company shall be that of a bailee under sections 151, 152 and 161 of the Indian Contract Act, 1872. Our readers will remember the recent case of the *Secretary of State in Council v. Kully Nath Mitter* in which the question arose as to whether Railway Companies were insurers of safety to passengers and it was held that they were not. We have shown in the present note that neither do they share the responsibilities of common carriers in India with regard to goods.

#### LAW MAGAZINE AND REVIEW.

##### CONTENTS FOR MAY.

The Working of the Patient Acts, by R. W. Wallace, K. C. The Latin of the Corpus Juris, by James Williams, D. C. L. The Inns of Chancery, by Ernest Jelf, M.A. Roman Law: Its study in England, by T. W. Marshall, B. C. L. Oxon. Origin and History of the King's Bench Division, by E. D. Parker. The Demise of the Crown, by W. Percy Pain, LL.B. Debt-slavery in the Malay Peninsula, by T. Baty, E.C.L. Whewell Scholar in International Law.

## Trade &amp; Industry.

By Mercantilist.

## CYCLES AND CYCLE REPAIR.

We have received from Messrs. Dawbarn and Ward, the second edition of their "Cycle Repair and Maintenance" being volume 21 of their Useful Arts and Handicrafts Series. Looking to the large sums invested in the purchase of cycles, a book of the sort containing instructions for the care of the machine and the repair of such damage as may be caused by the rider himself is a necessity. It is no wonder, therefore, that the first edition published about a year ago, has been so soon exhausted. We have no doubt the rapid sale of the book is due as much to the cheap price of 6d. as to the intrinsic value of its contents.

## A CYCLE REPAIR DEPARTMENT.

Talking of cycles, we may note that if dealers in new machines wish to do good business, it is well that they should attach a 'repair department' to their establishment. The machines often get out of order for one reason or another and a well-conducted repair department ought to improve the business and bring in good profits as much as the sale of new machines. Here is a list of tools which are required for a decent repair shop which we take from a recent issue of the *Ironmonger*.

## LIST OF TOOLS.

	£.	s.	d.
1. Turning-lathe and tools ... ..	25	0	0
1. Forge and blow-pipe ... ..	3	0	0
1. Canopy and forge ... ..	0	15	0
1. Anvil ... ..	2	5	0
1. Double erecting-stand ... ..	1	10	0
1. Heating stove and pipe ... ..	0	15	6
1. Enamelling-stove ... ..	16	0	0
Fittings of the Enamelling room ...	2	10	0
Enamelling brushes and tins ...	0	4	0
1. Fork-gig ... ..	1	10	0
1. Wheel-tube stand ... ..	1	10	0
1. Vice-tube clamp ... ..	0	3	6
1. Spoke-screwing Machine and dies...	1	10	0
1. Screw-plate and taps ... ..	0	6	6
1. Bit-stock, taps and dies ... ..	2	10	0
1. Wire brushes ... ..	0	2	0
1. Pair spoke-nippers ... ..	0	2	0

Total... £ 59 13 6

To the above total has to be added a sum of £ 6 for such items as benches, tongs, pliers, mallet, grindstone, turnscrows, benchcrices, beast drill, spanners, chisels, files, hacksaw and hammers.

## A CYCLE HIRE DEPARTMENT.

Another important branch of the cycle trade is the Cycle Hire Department. We believe there is hardly any cycle dealer in India who does not lend his machines out on hire. Whether he realises the full value and profit for the service rendered by his machine and for the wear and tear and the risk of breakage to which the transaction exposes him is very doubtful. We have known of instances in which the machines have been returned 'smashed' and the dealer has been unable to recover the cost from the rider. It will be useful therefore if the following remarks of a writer in the April number of the *Import and Export Trades Journal* be borne in mind:—

To make a cycle-hire department pay it is essential that only the best and strongest machines be used. Cheap or light cycles are worse than useless, for it takes more to keep them in repair than they earn. It is advisable to have rather fewer machines on hire than are likely to be in demand. They will then be oftener out, and consequently earn more money in proportion to the amount invested in them; and although you may disappoint a few customers in the height of the season, it will be better than having too many machines for your trade. The charges for hiring should be based on the condition of the roads and the class of customer. It is well to make the hour and day charges much higher proportionately than those for the week or month, as the hour hirer is usually indifferent, and the machine is generally returned dirty, and requires cleaning each time, whereas the machines which are hired by the week or month are kept clean, are well oiled, and in other respects are looked after. The charges which have been adopted by the majority of cycle-agents are 1s. for the first hour, and 6d. for each succeeding hour; 5s. per day 12s, 6d. per week, 22s. 6d. per fortnight, and 35s. per month.

"To obtain the best results, the department must be worked systematically, and the machines should be numbered consecutively—say on the saddle-lug—and kept in stalls or divisions (having corresponding numbers) in a locked room by themselves, the key to be in charge of a responsible person. The machines will be known and entered in the hire-book by their respective numbers. The advantage of having each machine in a stall of its own is that it keeps it in order, and permits of the entire stock being checked at any time during the season without difficulty. It is advisable to have such cycles checked at intervals to prevent their going astray.

"Below is a plan of the hire-book I use, extending over two pages:—

Date	1901 Feby. 1	Address	Ridgeleigh
Hour	9 A.M.	For	Day
Hire	6	Returned	7 P.M.
Name	J. Smith	Charge	5s.
	Remarks	Paid.	

"Each machine should be thoroughly examined when returned, and cleaned before being put back into its place.

"All hires should be paid for in advance, and the hirer held responsible for any damage done through carelessness. Machines hired for a week or longer should be re-entered at the end of the hire-book. This will enable one

to see at a glance what machines are out, and if any of them are overdue or not. It also keeps the front pages free of arrears, and each day can be checked off without trouble. To enable the cycle-agent to find how his hiring machines are paying him, and to show when a machine is getting worn out a return-book should be kept in which to register an account of each machine. An ordinary pass-book will do for this. Start by giving two pages to each machine. On the first page enter the earnings of the machine from the hire-book, and on the other the expenses for repairs, &c. It is very necessary that such a book should be kept, as it enables the proprietor to find at any time how this branch is paying, and it also helps to keep the repair department right."

#### THE PRESERVATION OF FRUIT.

We are indebted to the *British Trade Review* for the following description of a process for keeping fruit fresh and unchanged for considerable periods of time which has been introduced by the Lawton Patents, Limited, 57 B Hatton Gardens, London.

The desired end is sought by sterilising the atmosphere in which the fruits are stored and depriving it of most of its oxygen. For this purpose they are placed in an air-tight chamber, lined with non-conducting material in order that its temperature may remain uniform, and filled with air which, after passing through a mass of wool soaked with brine, has been blown through coke at red heat. The gaseous mixture thus produced, consisting mainly of nitrogen with carbonic oxide, carbonic acid, and small percentage of chlorine, is freed from sulphur and moisture by suitable purifying agents, and, after being cooled, is pumped into the chamber, where the fruits are submitted to its action for a period varying from twelve to thirty-six hours, but usually about twenty-four. At the end of the time moisture will be found to have developed in the atmosphere of the chamber; this must be removed by the use of the purifying apparatus just mentioned, and if it accumulates again—means are provided for its detection—the drying process must be repeated. Ripe fruit, it is stated, can in this way be kept unchanged for so long a time as to admit of its being imported from distant countries in perfect condition, and, moreover it is said that it will remain good, after removal from the apparatus, longer than fruit which has undergone the usual refrigerative treatment; it may therefore be picked properly ripe, instead of half green, as is usually necessary with present arrangements. If, however, ripening is required during transport by the Lawton process, it can be effected by admitting more oxygen to the chamber.

The fruit trade of India has yet to be developed and if people will care to profit as pioneers of new

industries, here is a field for their investigation and action. We have no doubt that particulars of prices may be had at the address given above.

#### A REVOLUTION IN CARPET MAKING.

We have no doubt that those who wish to encourage the manual industries of India are actuated by the best of intentions, but we are afraid that their sympathy is a little misdirected and misplaced. If any proof were wanted of the precarious condition of handicraftsmen generally in this age of invention of labour-saving machinery, we would point to the revolution which has just been effected in the weaving of carpets, we refer to the Hallensleben invention for manufacturing "piled" and "tufted" carpets. These carpets are, to all appearance, very similar to the oriental carpets. While it takes a day of eight hours to make one square foot by five boys and a master weaver in this country, the Hallensleben "double pile" power-loom turns out carpets of a similar kind, equal, it is declared, to the best hand-made oriental productions, at the rate of 35 square yards a day and upwards, without skilled labour. Mr. James Wade, the well-known textile expert in England, states that this invention constitutes the greatest advance made in the textile industry in recent memory. The method of colouring the yarns for the woven design is entirely novel. As it enables the manufacturer to dispense with a considerable body of hand labour, it is expected this will effect changes in the production of a wide range of other textile materials. The loom also is a mechanism of singular originality, dispensing altogether with a shuttle, thus economising time and power and enabling low-grade materials to be used, formerly incapable of being woven. The Hallensleben inventions are claimed to embody an advance in the manufacture of textiles comparable with that of Lord Masham. Like his improvements, they will have the effect of placing a material at present of prohibitive cost at the disposal of the masses. It is anticipated by the inventors that manufacturers will be enabled through these inventions to place home-made Turkey and similar carpets upon the market at one-third their present prices. There is no doubt that the invention will seriously affect the trade of India and we can only pity the poor weaver.

#### THE PAN-AMERICAN EXHIBITION AT BUFFALO.

American competition has become the topic of the day in industrial and commercial circles, and it is no wonder that it should be so, seeing that the Government of the United States furnishes aid in no small degree to all projects likely to push the sale of their manufactures. A notable instance

of the State's generosity in this direction is in connection with the Pan-American Exhibition at Buffalo. The purposes of this exhibition have been officially declared to be to celebrate achievements of the western hemisphere during the last 100 years; to promote trade among Pan-American countries and to present a great object lesson showing the progress of the western world up to date.

The State of New York has appropriated the sum of 300,000 dols. for exhibits, and a magnificent permanent building which has already been erected at a cost of 150,000 dols. Among the other States which have contributed are the following: Illinois, with 75,000 dols. for exhibits and buildings; Michigan, with 40,000 dols.; Missouri, with 50,000 dols.; Ohio, with 30,000 dols.; and Wisconsin, with 25,000 dols., all for exhibits and buildings. The appropriation of Pennsylvania is 35,000 dols., New Jersey, Oregon, and Alabama, 25,000 dols. each; Rhode Island, 30,000 dols., and many others have contributed smaller amounts.

May India ever expect subventions like these?

#### THE WOOLLEN INDUSTRY IN BRITISH INDIA.

A memorandum on the woollen industry of British India states that this industry expands but slowly, compared with the expansion of cotton and jute mills. There were only four mills at work at the close of 1900—one at Cawnpore, one at Dhariwal in the Panjab, one in the city of Bombay, and one at Bangalore—containing 594 looms and 22,286 spindles against 530 looms and 8,658 spindles five years ago. The capital employed in it is also relatively small, amounting only to Rs. 44,50,000. Only two of the mills, those at Cawnpore and Dhariwal, are of importance, the capital of these two concerns (Rs. 32,00,000) representing nearly three-fourths of the whole. These two mills weave cloth for the use of the army and police, and generally articles of more or less superior quality, using for the purpose of an admixture of Australian wool. There is, however, not much demand in India for woollen goods except of such sort as could hardly be profitably made in India in competition with the European mills, and any large expansion of the industry can hardly be anticipated.

There are in various places factories for the weaving of carpets and rugs, and of *pattu* and *pashmina*, but, though these industries are in the aggregate extensive, they are individually small, and the weaving is done by hand looms.

#### PREVENTING RUST ON PIPES.

The following simple and economical way of tarring iron pipes, to keep them from rusting, is

well worth notice. The sections as made should be coated with a coal-tar, and then filled with light wood shavings, and the latter set on fire. It is declared that the effect of this treatment will be to render the iron practically proof against rust for an indefinite period, rendering future painting unnecessary.

In proof of this assertion the writer cites the example of a chimney of sheet iron erected in 1866, which, though being treated, as he describes, is as bright and sound to-day as when erected, though it has never had a brushful of paint applied to it since. It is suggested that by strongly heating the iron after the tar is laid on the outside, the latter is literally burned into the metal, closing pores, and rendering it rust-proof in a far more complete manner than if the tar itself was first made hot and applied to cold iron, according to the usual practice. It is important, of course, that the iron should not be made too hot, or kept too hot for too long a time, lest the tar should be burned off. Hence the direction for the use of light shavings instead of any other means of heating.

#### A NEW MACHINE.

*Invention* reports that a machine has just been invented for pasting labels on tin cans at the rate of 10,000 an hour. The cans are set rolling along the machine, and each picks up a label as it passes a particular spot. The same inventor is completing a machine that will count post-cards and bind them in packages at the rate of 50,000 an hour.

#### PAPER WORK.

No. 31 of the "Useful Arts and Handicrafts Series" published by Messrs. Dawbarn and Ward treats of "Paper Work" and is an excellent little volume which no one should miss reading. Verily, we are living in a paper age. The uses to which paper and paper pulp are now put are infinite and various. Any material that is fibrous may be used for making paper pulp and provided one is a clever artist and workman, never mind the capital, there is ample scope for making good profit out of the raw materials which are abundant in this country. The use of paper boxes neatly finished is a special feature of modern trade and there is also a good field for paste boards, card boards, straw boards and brown boards. The total value of the imports of these latter alone into India is not shown separately in the trade volumes, but including paper, it averages about forty lakhs per annum.

### Medical.

*By a Doctor.*

#### THE STATE OF LONDON STREETS.

The April number of the quarterly *Journal of the Sanitary Institute* contains two most valuable papers by T. Blashill, F.R.I. B.A. and by Christopher Childs, M.A., M.D., D.P.H., F.C.S., Fellows of the Institute, on the "State of London Streets" and on "Ventilation-success and failure of methods in use." Although the various defects noticed and reforms suggested in those papers in the matter of street cleaning and ventilation of buildings have no application to the towns and cities in this country in all respects on account of the dissimilarities that exist in the conditions of climate, of traffic, of administration and of law, still some of them are not without practical interest to the Municipal administrations here. Here is a description of the dirt that the London Street consists of and how it comes about :—

A good deal comes from the wear and tear of macadamized roads, less from granite and wood pavements, least from asphalt. In some roads particularly where there are tram lines, and on smooth pavements, there is a considerable amount of sand that has been used to prevent slipperiness. All these materials are harmless, or of small account compared with the great bulk which is simply horse droppings worked by wheels into slush in wet weather and ground into dust in dry. In some streets of small traders and where costermongers congregate, there is very serious addition of animal and vegetable refuse." Above all there are the London dogs which are getting either more numerous or dirtier in their habits. Our streets here, have most, if not all, the sources of dirt above described. The slush that is formed of dirt on the roads is carried home by pedestrians and either left upon the step or deposited on mats and carpets. The clothes are fouled either in walking or by splashes from vehicles; this dirt is brushed off inside the house in the form of dry dust. The dry dust in the street blows about in clouds obscuring the view and annoying the passengers, gets into the houses at every means of access, chiefly by the window when it is open to admit the fresh air and deposits itself on our stores of fresh and cooked food. Poor children whose play-ground is the street, run home with the street-dirt upon them. In London and in many continental cities where the streets are subject to immense traffic, many materials have been tried for paving the streets but none of them was found satisfactory. Granite road was noisy, wood being porous absorbed filth, asphalt was slippery. Mr. Blashill recommends "macadam" for roads other than main arteries. It has also its merits and its faults but Mr. Blashill complains that it is never used as the inventor intended. 'What is macadam' and what is not, should be tested as follows :—"stones that will pass through a two inch ring and that are covered with dirt or hoggin do not form a macadam road and those that would pass through a ring of about one and a half inches are "macadam." The result of the discussion that followed was to

affirm the following propositions in a general way. To secure a material which would form a good hard road way is to take one important step towards avoiding road dirt. The next step is to remove the droppings of horses before they are ground into dust by wheeled vehicles. To employ able bodied scavengers and in sufficient numbers to finish cleaning of streets early in the day is another. To clean the roads such as are paved with wood and other similar materials with water and allow the dirty water to pass through the sewers is also recommended, and last but not least to prevent people from throwing refuse into the streets by police arrangements.

#### BURDETT'S HOSPITALS AND CHARITIES, 1901.

"Burdett's Hospitals and Charities, 1901," is the year-book of Philanthropy and the Hospital Annual edited by Sir Henry Burdett, K.C.B., and published by the Scientific Press, London. The work, as the name indicates, is a storehouse of information concerning everything connected with hospitals and asylums of the world from the earliest to the present day, and so far as the general management of the hospitals is concerned, will be found to contain the fullest and latest information.

#### CURE FOR HYDROPHOBIA.

The leaf of a variety of acachia, known in the Deccan (where it grows wild) by the Hindustani name of Dewana Babo is declared to possess properties which make it a safe cure for hydrophobia. The leaves are simply ground up, and the juice extracted from them is given to the patient to drink as soon as possible after he has been bitten. It is a nauseating drink but this need not cause alarm. The decoction should be administered for three mornings in succession, the diet during this period being restricted to plain unleavened bread or boiled rice and curds. The remedy is said to have been tried in a number of cases with unvarying success. Four individuals, who had been bitten by dogs which were unmistakably rabid, and which subsequently bit other men and animals who developed hydrophobia and died, were treated with the decoction, and are still alive and well.

#### SALT WATER.

It is stated that salt water is a valuable tonic for the liver and stomach; in fact, it has been known to cure long-standing cases of biliousness when all drug preparations have failed. It is also reckoned an excellent cure for insomnia, and some who have been martyrs to dyspepsia declare it to be the only thing that has ever done them any good.

#### PURIFICATION OF DRINKING WATER.

A rapid and practical sterilisation of potable water consists in treatment with a mixture of equal parts of dry aluminium sulphate and calcium hydrate with 10 per cent. of potassium permanganate.

Of this 15 to 20 grains per gallon are required for water and 60 grains for sterilising sewer liquids. If the quantity added is sufficient, the red colour of the water remains after a contact of 15 minutes. The water is then filtered through a funnel partially filled with wool which is impregnated with manganese sesquioxide, through which it passes clear and colourless. When the wool becomes so much covered with manganese oxide as to impede filtration, it is sufficient to boil it with water containing 0.5 per cent of hydrochloric acid, to render it again fit for use. Practical experiments with various bacteria have proved the efficiency of the method.

#### RULES FOR DYSPEPTICS.

*Health* gives the following rules for dyspeptics :--

First.—Eat slowly, masticating the food very thoroughly, even more so if possible, than is required in health. The more time the food spends in the mouth, the less it will spend in the stomach.

2. Avoid drinking at meals; at most, take a few sips of warm drink at the close of the meal, if the food is very dry in character.

3. In general, dyspeptic stomachs manage dry food better than that containing much fluid.

4. Eat neither very hot nor cold food. The best temperature is about that of the body. Avoid exposure to cold after eating.

5. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Sometimes less than is really needed must be taken when digestion is very weak. Strength depends not on what is eaten, but on what is digested.

6. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating nor within four hours of a meal.

7. Never eat more than three times a day, and make the last meal very light. For many dyspeptics, two meals are better than more.

8. Never eat a morsel of any sort between meals.

9. Never eat when very tired, whether exhausted from mental or physical labour.

10. Never eat when the mind is worried or the temper ruffled, if possible to avoid doing so.

11. Eat only food that is easy of digestion, avoiding complicated and indigestible dishes, and taking but one to three kinds at a meal.

12. Most persons will be benefited by the use of a wheatmeal, cracked wheat, and other whole-grain actions.

#### THE USE OF COSMETICS.

The use of cosmetics dates at least from ancient Egypt but luminous cosmetics were a triumph of

the nineteenth century; These are skin powders of rice, chalk, zinc white, &c., with a dash of phosphorescent powders, such as the sulphides of calcium, zinc, barium, and strontium. Sulphide of zinc prepared according to the Charles Henry process gives a fine greenish white light in the dark and a velvety sheen to the skin in rooms artificially lighted. The greenish tint is masked in the cosmetic by a little littrine and alkanna or carmine. The composition of one of these new scientific cosmetics is given by a French journal as :—Pounce, in fine powder, 100; phosphorescent sulphide of zinc, 200; carbonate of lithine, 25; and carmine, 2 parts. Aluminium in fine powder applied to the skin gives it a silvery lustre, and is used by the athletes known as the "Hommes d'Argent."

#### A DISTINGUISHED PUNJABI SPECIALIST.

A correspondent to the *Indian Magazine* and *Review* gives an account of the career of Dr. Paira Mall of Amsterdam, a native of the Punjab. Dr. Mall spent five years in England, where he studied medicine in London; four at the University of Durham. His thirst after scientific work drove him to Germany, where, under the most celebrated German professors, he has been working on special branches of medicine. At the University of Tübingen he began some original researches under Professor Grützner, the well-known physiologist. Dr. Paira Mall wrote a very important work on the Comparative Physiology of Digestion, which was published in Pfüger's *Archiv für physiologie* in 1900. His further researches on electrical changes in muscles are interesting as well as important. From Tübingen he went to the famous old University of Heidelberg. There he took up mental diseases as his special branch of study, under Professor Kraepelin. After that, the doctor came to Munich, where he took the degree of M.D. with honours. He stayed there eighteen months, and worked further on the diseases of the nerves. His perfect mastery over the language enabled him to enjoy the society of the learned circles that are to be found in that beautiful town.

Dr. Paira Mall has not only excelled in medical science, but also in Philosophy. He has done a good deal in Germany in expounding the Vedantic system of Philosophy, comparing the same to the system of Kant, and has excited great interest among German philosophers who hold chairs at different Universities of Germany. He has shown to the learned world the beauties and treasures hidden in the Indian systems of philosophy.

During some months the learned doctor has held a very responsible position as resident physi-



cian in one of the largest sanitariums in Germany for diseases of the nerves. This sanitarium is beautifully situated on the lake of Constance. It is frequented by the rich people from all parts of the world with worn-out nerves. Of the three nerve specialists, one is a Punjabi. I think no Punjabi has ever held such a position in Germany, or, in fact, anywhere on the Continent.

#### INDIAN COW'S MILK.

The following conclusions as to the composition of the milk of Indian cows are published in Agricultural Ledger No. 19 of 1900, being the results of a large series of analyses by Dr. J. W. Leather, Assistant Agricultural Chemist to the Government of India :—

The milk of the Indian cow corresponds to that of the English animal, and the proportion of proteids, lactose and mineral matter is approximately as 9 : 13 : 2. In the case of the buffalo milk the relationship is different, that of the proteids being distinctly higher, that of lactose lower, than in cow's milk. Generally it may be said that "(a) The milk of the Indian cow contains a high proportion of butter-fat, varying from 4 to 6 per cent; buffalo's milk contains usually much more, varying from 5 or 6 per cent. up to as much as 10 per cent. (b) The percentage of proteids (albumen and casein) usually varies in cow's milk from 3.1 up to 3.5; in buffalo's milk from 3.5 up to 4.3. The buffalo's *nevasi* was exceptional. Such proportions as 5.0 and 5.2 per cent. of proteids as stated in the Madras publication are never found. (c) The percentage of milk sugar (factose) in the cow's milk varies from 4.4 to 5.0, and in buffalo's milk it is present in about the same proportion. It is never so low as is stated in the Madras publication. (d) The percentage of mineral matter in cow's milk and buffalo's milk varies from about 7 to 8 as it does in English cow's milk."



### THE PREVENTION OF EPIDEMIC ZYMOTIC DISEASES IN INDIA,

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#### Science.

(By a Master of Arts.)

#### ELECTRICITY IN AGRICULTURE.

An association of farmers in Bavaria, states a writer in *Fielden's Magazine*, are building large electrical works to supply power for agricultural uses. The current is generated near the village of Schaffersheim, a distance of seven miles from the district of consumption, and is supplied partly by steam and partly by water-power. From there it is to be sent at a pressure of 5,000 volts to the surrounding villages, where it will be employed for driving threshing machines, chaff cutters, bruising mills, &c. The motors used are very simple and compact, so that they can easily be handled by farm hands. If this experiment should prove successful, it is almost certain to be imitated in other portions of Germany, as the power used, according to the estimates, is far more economical than horse-power or steam-power in separate plants.

#### A NEW GERM-DESTROYER.

Ozone when passed into water is found to kill micro-organisms. This discovery has been made in Lille, where the water is notoriously bad, by two French gentlemen. They are taking steps to purify the water-supply of that town. It may be stated that ozone is another form of oxygen which is common in the air after an electrical discharge of lightning and it is manufactured by a current of electricity being passed through air. It has been already found that heat alone up to the boiling point is not an efficient germ-destroyer, so that this discovery will be welcomed by the medical profession.

#### A GOOD ALLOY.

Experiments have shown that any alloy of aluminium and zinc possesses remarkable qualities. It is white, and takes a fine finish, and is equal in strength to cast iron, but superior in elasticity. On the other hand, it melts at so low a temperature that it can be liquefied in a ladle over an open fire. In the liquid form it fills a mould, running into all the small parts much better than brass, but it is more brittle than brass. Its use does away with the foundry furnace, and its technical advantages are obvious. The strength of this metal, says *Science*, is 50,000 lbs. per square inch.

#### BOTANY.

We have received a manual entitled "Botany" (part 1) published by Messrs. E and S. Livingstone in their catechism series. It is evidently a synop-

sis for students and the author has made a judicious attempt to condense into as small a space as possible the leading facts necessary for an elementary knowledge of Botany. We are impressed with the simplicity of arrangement and the clearness of the diagrams which illustrate the book. The manual is likely to be popular with students preparing for examination but who are already familiar with the subject.

THE RESPONSE OF INORGANIC MATTER TO MECHANICAL AND ELECTRICAL STIMULUS.

On Friday, May 10, Dr. Jagadis Chandra Bose delivered one of the Friday evening discourses at the Royal Institution, Albemarle Street, London. The subject was "The Response of Inorganic Matter to Mechanical and Electrical Stimulus." The following abstract of the lecture appeared in the *Times*:—

Professor Bose began by discussing the change of form exhibited by living muscle under stimulus, and showed how the character of the response depended upon the particular kind of muscle used and the surrounding conditions in which the experiment was performed. In other tissues, too, stimulus was followed by response, though not by the same sort of response as in muscle. Thus the eye responded to the stimulus of light, a current of electricity being produced in the optic nerve. This electric response had been looked upon by some authorities as the most general and delicate sign of life, but in fact it was given by inorganic bodies too, under stimulation, and these showed the most remarkable parallelism with living ones in both the form of the response and the conditions under which it was manifested. Thus, tapping of a piece of metal—lead, for example—joined up in circuit with a delicate mirror galvanometre gave rise to a response in the form of an electric current, and, further, the curves representing the response and recovery of metals after stimulation were identical in form with those recording the behaviour of muscle under stimulus. Moreover, the character of the response was altered by precisely the same influences with inorganic as with organic bodies. Under a series of stimuli applied in quick succession the metal was thrown into the same tetanic condition as a muscle. Again, its response was stronger at a particular temperature, decreasing at both higher and lower temperatures; this corresponded to the heat and cold rigour of muscle. Further, it was affected by drugs just as were living substances; it was excited by stimulants and depressed by depressors, the same drug sometimes acting with opposite effect according as the dose was large or small, while the response could be killed by the injection of poison and revived by the exhibition of the appropriate antidote. Professor Bose, in the course of his lecture, showed an artificial response, based on the facts he had described, which was sensitive to visible light, to ultra-violet rays, to electric waves, and, in fact, to every sort of radiation. This apparatus recovered from the effect of stimulus without external aid, and there was no reason, he declared, why the coherers used in wireless telegraphy should not also be made self-recovering, and so employed without the troublesome and sometimes destructive tapping device now in vogue. He concluded with the remark that this analogy between the organic and inorganic worlds

enabled them to begin to understand the quotation from one of the ancient books of his race: "They who see one in all the changing manifoldness of this universe, unto them belongs eternal truth, and unto none else."

A WOUND-STITCHING MACHINE.

Dr Paul Michel, the famous French physician, has invented a remarkable instrument for stitching wounds. With this instrument wounds on a body can be stitched effectively, quickly, and without causing any pain to the patient. Heretofore wounds were stitched by hand, and this operation was not only somewhat dangerous and slow, but also decidedly painful. Dr. Michel's instrument consists of a forceps or pincers and of a case or sheath, which contains a number of nickel hooks or band somewhat similar to those which are frequently seen on the corners of cardboard boxes. A slight pressure suffices to free these hooks from the sheath, and within one minute between twenty and thirty of them can be placed on a wound in such a manner that they will effectively close it. The reason why they cause no pain is that the tiny rounded points only penetrate the epidermis and not the lower layer of skin. Other advantages which they possess are that they can be easily disinfected, that it is no trouble to remove them from the skin after the wound is healed, and that they leave hardly any trace of a scar. Dr. Michel has received congratulations from the most distinguished European physicians, and his instrument is being rapidly introduced into leading hospitals.

SCIENCE AND COMMERCE IN GERMANY.

Professor Carhardt, of the American Institute of Electrical Engineers, declares that by the union of scientific instruction and industry, the Germans are rapidly marching to the industrial supremacy of Europe. In Germany science is regarded as a factor in commerce. The Reichsanalt, or Government laboratory, in Berlin cost £200,000 to institute, and requires £1,500 a year, but the money has been well spent. He believes that if England is losing her supremacy in commerce and manufactures, it is owing to her failure to utilise the lessons of science to the full.

THE CURATIVE POWER OF THE RONTGEN RAYS.  
(THEIR DETECTIVE VALUE.)

In addition to the invaluable assistance given by the Rontgen Rays in locating and diagnosing disease and injury, there is, in the opinion of the Rontgen Ray Societies, a great future for the rays as a curative power.

"We are accumulating considerable data on this matter," said a member to a representative of the *St. James's Gazette*, "but we do not progress fast enough. The rays have been used in locating tuberculosis, but their potential value as a cura-

tive agent cannot be stated as yet owing to insufficient data. The cure of lupus has been successful up to a point, as with other complaints, but it will be some time before we are able to say very much definitely on the point. Personally, I believe the rays have a great future before them in this direction."

"One would have thought that in the few years the rays have been used, and with the large number of hospitals, sufficient data would have been gathered as to its curative power."

"That is the idea of everyone who has not examined the matter in all its bearings. You see the hospitals are so full of work in the morning with their big statical machines and Rontgen apparatus, in the location of injuries and diseases, that they have no time to consider much about their curative effect. It is the same with medical men all over the country. In fact, the curative side of the experiments has to be left to their leisure hours, which are, as you may be aware, very infrequent."

"Were it possible to devote more time to the curative side, doctors and hospitals might be able to dispense with a great deal of their activities, and the all-round task of curing disease would, of course be considerably diminished?"

"That is so, undoubtedly, but what is to be done. We want some millionaire to endow a large institution where the curative powers of the rays would alone be experimented with."

One member went on to say that the Society had a soldier from the front at their last meeting, and they could distinctly locate a bullet in his brain, actually impinging, he believed, on the grey tissue. "Yet the man was as well as you or I." That, however, is not new. Bullets have passed clean through the grey tissue of the brain and come out at the back of the head without doing any harm to the man ultimately.

"You, of course, know," he continued, "that the Post Office make great use of the rays. They bundle parcel after parcel with lightning rapidity along a slab, and can see in a moment if there is anything that ought not to be in the parcel. It is also used extensively in the foreign Customs. Some time ago watches were sent into these countries inside Bibles. The rays have done away with that profitable source of income."

#### SYMMETRICAL DISTORTION OF PHOTOGRAPHIC REPRODUCTIONS.

It is commonly said that the photograph cannot lie, but there are many things done by the photographer which make objects appear to be what they are not.

In photographing interiors of business premises for advertising purposes, it is an old dodge

to use a wide angle lens which lends distance to the walls and makes the room assume palatial proportions. The disadvantage, however, is that near objects appear excessively large and distant ones extremely small. What seemed to be required was a lens which would distort the picture just where wanted, that is to say, if the room to be photographed was too narrow, yet high enough, the picture could be expanded in the width, or on the other hand, if the apparent height wanted increasing, it should be possible to do it without altering the breadth of the view. However, a writer in the *Amateur Photographer* recently described a very easy way of making a lens distort in either a vertical or horizontal direction.

It consists in placing behind any ordinary lens a cylinder lens, such as is used by spectacles makers. This lens may be described as a slice off the side of a cylinder, so that it is plane on one side and a segment of a circle on the other. Such a lens will act very similarly to the distorting mirrors which, when placed horizontally, make the person looking into them short and stout, whilst by placing vertically, the person looks ludicrously tall and thin.

However, the object in using the lens in the present case was not to produce this kind of distortion, but to get an enlargement of some object in a landscape in a particular direction so as to obtain a more pleasing composition. This was done by using in conjunction with the cylinder lens a diaphragm having a slit-shaped opening in it measuring  $\frac{1}{4}$  inch width. The diaphragm was placed in some cases with its slit crossing the axis of the cylinder lens, and in other cases being parallel to each other. The most astonishing variety can be produced in the shape of the picture according to the relative positions of the slit and the cylinder lens, and the pictorial effect may be improved or otherwise at the will of the operator. The value of photographic evidence in judicial enquiry must of course deteriorate with the progress of this method.

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A critic of Indian education has, in the columns of the *Times*, made a violent attack on our whole system of education. He considers it as worse than a failure, a great political blunder. It has made of the Indian a moderately good clerk in Government offices, but has neither improved his character nor prevented him from being openly hostile to the administration. He cannot be regarded in a serious light; his belief in education is 'pathetic'; he is less than half-educated; and the "higher education" of natives is *ironically* so called. Such immoderate statements are found scattered throughout the article; and the whole contribution is marred by an acute form of that political jaundice to which of late the Anglo-Indian has become fatally liable. This is the more to be regretted as the article exposes some of the real defects of the educational system and may, if not vitiated by open antipathy to the 'Babu,' be of some service to the cause of reform.

Two admissions are made by this critic, which, from him and in the obviously reluctant manner in which they are made, are of singular value. One is that education can no longer be stopped, though "it would doubtless be the simplest line to take." The other is that the native of India is, after all deductions are made, educable; there are possibilities in him; and in certain directions, if he is given a chance—our critic is cautious and will not commit himself too far—he can reach a high level of ability. Moreover he is naturally loyal, his disloyalty being "mainly superficial, and due to the fact that, being less than half-educated, he sees the world in a distorted perspective." This is an acknowledgment which the Babu, the Mahratta, and the Aiyar may add to the long array of testimonials to character and educableness which they are obliged—unhappy suspects—to carry about

with them ready for production in answer to every ill-tempered traducer.

Passing now to the substantial part of the criticism, we find first of all the radical defect stated as 'the apotheosis of the text-book.' The result of this is a monstrous and incredible process of cramming which renders education in any real sense impossible. Thus vaguely enunciated, the charge appears too sweeping; but there is abundant truth in it, though the remedies are not obvious. One is therefore surprised to read in the article:—"And the monstrous form which this evil takes is the more discreditable because (up to a certain point and at least in its grossest forms) it could very easily be remedied by a few simple enactments." Not even a hint as to the nature of these simple enactments, is however, vouchsafed; and to us the remedy appears by no means so easy as it does to this writer. A better constitution for the Senates of the Universities is next recommended, and in this matter, the critic is only preaching to the converted. Another reform is the raising of the standard required for the entrance examination. We may be sure that this step also will gradually be taken, seeing that two such widely different authorities as Sir Antony Macdonnel in the north and Dr. Miller in the south, have given expression to similar views. The principle may be at once accepted, but the obstacles to its actual realisation are great and cannot be overcome except by a long and steady course of improvement. The appointment of a Minister of Education for all India, recently so much talked of, is likewise advocated by the *Times* contributor. Dr. John Murdoch of Madras long ago cried out for such an appointment. Bishop Welldon has recently given his support to the proposal; and the Viceroy himself is commonly believed to have long had it in contemplation. As we wrote in the *Review* in a former issue, it is impossible to contend that Indian opinion is earnest about it. At any rate, the necessity for such an office has not been sufficiently

demonstrated; and the chances are not many that a person can be found uniting experience of recent European educational methods with intimate knowledge of Indian peoples, and able to withstand the deadening influence of Indian official life. Unless this *rara avis* is found, it is difficult to see what good can result from the creation of a new office which depends for its usefulness solely and exclusively upon the personality of its holder.

Bishop Welldon has succeeded in making himself noted, if not exactly famous. The Indian public, as well as the press, will watch with intense interest his Lordship's future utterances—and their sequel. For if the reverend gentleman is prone to indiscretion in speech, he is at least equally ready to make what reparation is subsequently possible. And we may presume that his latest recantation is as sincere as the unlucky Magdalen oration that has called forth an emphatic and dignified protest from Sir Antony Macdonnel. The Government of India has allowed itself to be associated with Sir Antony in disclaiming any intention to impose Bible-teaching on all schools—a disclaimer rendered necessary by another of the Lord Bishop of Calcutta's 'blazing' indiscretions. Altogether within a very short official career, Bishop Welldon has given enough evidence to show that he requires to be kept in order,—if indeed, he has not learned by this time to keep his tongue in order. Out of evil cometh good. The interest that his name now calls forth in the public mind may, if added to real genius, lead Dr. Welldon yet into the fair fields of bright renown. Instances of such happy transformation are not wanting; and we have too strong a faith in the power of earnestness and enthusiasm not to hope that the Metropolitan will realise the responsibility that attaches to his position, and crown his undoubted abilities with great and good work.

We are indebted to Professor J. H. Stone for the full text of an interesting paper on "The British Monarchy" which he read recently before the Rajahmundry College Metcalfe Association. He sets forth in a lucid manner the various steps by which the British Monarchy, "while preserving its form has changed its character" and its value to the Empire especially as exemplified in the person of our late revered Queen.

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### SOME ADVANCES IN BIOLOGY DURING THE VICTORIAN ERA.

TO a student of Natural history at the present day with the almost bewildering number of technical treatises and the countless special papers on particular sections of this great subject at his disposal—to say nothing of the elaborate microscopes and perfect section-cutting machines with which he is accustomed to work—it is difficult to realise how different was the position in these respects of his predecessor at the commencement of the Victorian era, and how much of the knowledge he has now at his command was acquired during the most important and the most fruitful epoch that the world has ever seen. Most of us, probably, regard the works of Owen and Darwin as belonging, in great degrees, to a past age, and in a certain sense this is a perfectly just conception. But Darwin's voyage in the "Beagle" which lasted from 1832 till 1836, had only just been brought to a conclusion at the commencement of the reign, and although certain letters written to Professor Henslow at Cambridge during that memorable voyage were published in 1835, the account of the voyage itself was not given to the public till her late Majesty had been sometime on the throne. And old as now seems the theory of the origin of species by means of natural selection, yet Darwin's epoch-making work on that subject did not make its appearance till 1859,—considerably more than twenty years after the commencement of the reign.

Owen did, indeed, publish one treatise at least in pre-Victorian days, namely, a paper on the milk-glands of the duck-billed platypus of Australia; but practically the whole of the rest of his work was a product of the era under consideration.

Huxley, the great champion of the Darwinian theory, accomplished the whole of his life's work during the "record reign;" and it is perhaps not

too much to say that it was very largely due to his advocacy and writings that the doctrine of evolution of animate (as well as of inanimate) nature triumphed as soon as it did over the opposing and adverse influences which were at first arrayed against it.

The acceptance by a very large majority of those whose opinions on the subject are of any value of some form of Evolution (not necessarily natural selection) as the true explanation of the origin and relationships of animals and plants may indeed be justly regarded as the crowning triumph of the biology of the Victorian era. In the early part of that epoch Owen had been on a wrong track in trying to explain the mutual relationships of vertebrates by reference to a supposed "archetype" which had afforded the model on which the construction of all had been based. But he got no further than this. And it was left for Huxley to demonstrate that a large number of types of vertebrated animals could be traced gradually from a more advanced into an earlier and lower form.

This could of course only be effected by means of a comparatively full acquaintance with the remains of extinct animals belonging to epochs earlier than our own. And although very much had been done in vertebrate paleontology previous to 1837—notably the investigations of Havier into the structure of the fossil mammals discovered when digging the fortifications of Curis in the Montmartre gypsum,—yet what had been effected previous to that date is comparatively insignificant to what had been accomplished subsequently. Darwin's discoveries in South America gave us for the first time some idea—faint enough it is true—of the remarkable peculiarities of the extinct fauna of that country, his material being worked out and described by Owen so far as was possible with the imperfect specimens which had been brought home. Little by little our knowledge of the old South American animals gradually increased, till before the end of the reign we became acquainted with that marvellous series of

gigantic armadillo-like creatures, still more gigantic ground-sloths, and strange types of hoofed mammals whose skeletons now form the glory of the La Plata museum.

During this long period equally important paleontological discoveries were taking place in other parts of the world; and the reign of which we are treating saw the discovery of the first bone which led Owen to announce the former existence in New Zealand of extinct birds by whose side the ostrich was a comparative dwarf. The correctness of this bold announcement was soon conclusively proved by the discovery of other bones and later still of complete skeletons of the various species of moas which formerly inhabited those islands.

Similarly discoveries in Australia showed that marsupials more or less nearly allied to the species inhabiting that island continent existed there in earlier epochs of the earth's history. And the important generalisation was thus reached that the different regions of the globe showed in past epochs the same peculiarities in regard to their faunas which they possess at the present day, only often in a more pronounced degree.

Not only have discoveries of extinct faunas like these been of the utmost importance in regard to the mutual relationships and evolution of living beings, but they have likewise contributed largely to a right appreciation of the true principles on which the science of the geographical distribution of animals should be founded; a science which we shall see below, is a special product of the Victorian age.

Although Falconer and Cantley collected most of the wonderful series of fossil remains of mammals from the Siwalik hills before Queen Victoria came to the throne, yet the full description of these was not given to the world till between the years 1845 and 1849; and this description profoundly modified previous conceptions of the relationships and distributions of many of the larger mammals.

The description by Professor Gaudry of an equally wonderful extinct mammalian fauna in

Greece only dates from 1862; while the discoveries of other more or less similar assemblages of fossil animals in Hungary, Samos, Persia and China are of much more modern date.

In the year 1825 Mantell announced the discovery in the Wealden of Kent and Sussex of a gigantic land reptile for which the name of *Iguanodon* was proposed. But for many years little or nothing definite was known as to its real structure and affinities. Little by little, however, the bones were put together—sometimes correctly and sometimes incorrectly—till at length the structure of this strange monster was much manifest by the discovery of entire skeletons in Belgium. These skeletons demonstrated the correctness of the idea at which Huxley, after many years study, with very imperfect materials, had arrived that this and other kindred reptiles collectively known as dinosaurs, were really related in the structure of their skeleton much more closely to birds than to any other group of animals, and consequently that birds and reptiles were diverging branches from one common ancestral stock. Huxley likewise demonstrated the near kinship existing between amphibians (that is to say, salamanders, newts, frogs and such like) and fishes. And he was accordingly induced to brigade birds and reptiles in one great group, under the name of *Sauropsida*, and amphibians and fishes in a second as *Ichthyopsida*. Although further discoveries of extinct types have proved the existence of a closer union between reptiles and amphibians than was at first supposed to be the case, the main correctness of their grand generalisation has not been called in question.

But it has come to be realised that the dinosaurian reptiles, as we know them, cannot be regarded as the direct ancestors of birds; and many of the resemblances are now attributed to what is known as parallelism;—a mode of development which was only realised during the late Victorian era. According to this doctrine, two groups of animals which had but little in common may present a curious parallelism in both.

their internal and external structure, although the points of resemblance have been developed quite independently.

And here it may be mentioned that a fortunate discovery about the middle of the century made known to us a type of extinct bird which was not only the oldest representative of the class, but differed in many important structural characters from all living members of the class. This was the lizard-tailed bird, or *Archaeopteryx*, first known by the impression of a feather in certain lithographic limestones but soon after by a nearly complete skeleton from the same deposits which was described by Owen in 1862. Although this specimen was insufficient by itself to prove that the primeval birds were furnished with teeth, this most important fact was demonstrated many years later by the great American paleontologist, Marsh, whose loss we had to deplore so recently. These toothed birds were discovered in the cretaceous strata of Kansas.

And this brings to our notice the fact that the discoveries which took place in North America during the second half of the Victorian period practically revolutionized our previous ideas of vertebrate paleontology and development, and furnished us with an amount of material in a state of perfection which had not previously been dreamt of. A very large proportion of the fossil vertebrates described from Europe were known only by teeth or by single bones, frequently in a more or less imperfect condition. But the new discoveries in the United States, which came at a most opportune moment for the further development of the theory of evolution, revealed to us entire skeletons of many of the reptilian and mammalian types which were only very imperfectly known through the European examples, together with a vast number of totally new forms. These not only revealed to us the fact that there were at least three totally distinct groups of dinosaurian reptiles—some of which walked on all fours and were fully sixty feet in length, while others of

somewhat less gigantic stature stalked about on their hind legs after the fashion of birds—but they likewise enabled Huxley to work out the pedigree of the horse, and to demonstrate its descent from a small animal no larger than a fox, with five complete toes to each foot. Similar pedigrees were worked out by the American naturalists for many other groups of animals—notably the camels and llamas; and the theory of evolution was thus placed on a much firmer basis than it could have acquired in any other way, so that it became practically a demonstrated fact, and emerged completely from the theory stage.

These and other discoveries enabled naturalists for the first time to thoroughly realize the essential differences separating the primitive animals of older periods of the earth's history from their modern successors. And the new familiar terms "Generalized" and "Specialized" were invented to express their essential differences. The horse, for example with its single-toed feet, long limbs, and high crowned grinding teeth is a most highly specialized animal whereas its early ancestor *Phenacodus*, with its five toed-feet, short limbs, and low-crowned simple grinders is as essentially a generalized type. As soon as the importance of discoveries of this nature was fully realized, naturalists turned their attention to working out the phylogeny of all groups of animals, and to forming classifications which should exhibit their real relationship and their lines of descent. The great importance of adaptation to surroundings as a factor in modifying animal life is likewise a feature which was first recognized in a philosophical manner during the late reign, as was also the circumstance that widely different groups of animals may come to resemble one another very closely in external characters owing to the similarity of their mode of life, as is well exemplified by the familiar instance of swifts and swallows.

But before finally quitting the subject of extinct groups of animals reference must be made to the discovery in the older secondary rocks of



the Cape Colony by the late Mr. Bain during the early part of the Queen's reign of the remains of a type of reptilian life which was at that time unknown elsewhere. Some of these anomodont reptiles, as they are now called, had skulls provided with a single pair of tusk-like teeth in the upper jaw (*Dicynodon*), while in others there was a full series of teeth which in their form and arrangement recall those of the carnivorous mammals. Moreover, these remarkable South African reptiles show a most suggestive resemblance to mammals in many other parts of their organisation. And although much of the tangled skein still remains for future investigation to unravel, there can be little doubt that in these anomodont reptiles we see creatures not far removed from the ancestral stock of the mammalia. It has therefore to be laid to the credit of the naturalists of the Victorian era that they have indicated to a considerable degree the probable pedigree of both birds and mammals.

In many respects the above-mentioned extinct South African reptiles appear to have been more nearly allied to the duck-billed platypus and echidna of Australia than to any other living representatives of the mammalia; and as several of the oldest known fossil remains of mammals appear to be nearly related to the species mentioned, there is a probability that the monotremes, as the living forms are called, represent the survivals of the connecting links between mammals and reptiles. This fact that these primitive living mammals lay eggs—although rumours to that effect have long been current, and it is asserted that samples of the eggs were actually in an English museum for some twenty years—was not authenticated till 1884, when Mr. Caldwell startled the zoological world with an announcement to that effect.

Neither was it known till a few years ago that the duck-billed platypus possesses true teeth in early life, although these are subsequently shed and their place taken by horny plates which grow

up beneath them and this seems an appropriate place to mention that the working out of the homologies and mode of succession of the teeth of mammals in general is almost entirely a work of the Victorian era, which was commenced and to a great extent perfected by Owen, although Flower and others ably assisted in carrying on the investigation. Special attention has been directed by many to finding rudiments of milk, or deciduous teeth in groups where they were supposed to be wanting; and the fact that living marsupials never change more than a single pair of teeth in each jaw may likewise be reckoned as one of the most remarkable zoological discoveries of the reign.

To pass to a totally different subject, and one which only in fact comes under the denomination of biological, it is most important to remind the reader that the co-existence of man with the extinct mammals of the glacial epoch is entirely a discovery of the Victorian age. Although opposed with extraordinary bitterness on its first announcement, it has long since been accepted as an incontrovertible fact, and it has of necessity profoundly modified our conceptions of man's relation to the lower mammals, and of the date of his appearance on the globe. For many years after this discovery comparatively little fresh information of importance was obtained with regard to man's ancestry and antiquity, but a few years ago a skull was discovered in Java indicating an apparently lower type of man (the so-called *Pithecanthropus*) than any previously known. This "missing link" has, however, still to be found. Two years previous to the accession of Queen Victoria, Swainson published a work under the title of the "Geography and Classification of Animals"; but it was not till the middle of the reign that the subject of the geographical distribution of animals was studied in a scientific spirit; the two great pioneers in this branch of research being Slater and Wallace, who worked quite independently. As the results of these and other investigations, it was found practical to

parcel out the globe into a number of more or less distinct zoological regions, according to the nature of the animals by which they are inhabited. The most distinct of these regions are the two respectively typified by Australia and South America, but the enumeration of these would take us, perhaps, too near the dominions of geography. The changes in the distribution of land and water on the surface of the globe indicated by the present and past distribution of animal life certainly belong to physical geography rather than to zoology.

The study of the growth of coral and the mode of formation of coral-islands is however a more distinctly zoological subject; and it is to Darwin, whose book on coral-islands was published in 1851, that we owe the important discovery that the ring-like coral-islands known as atolls are really crowns marking the sites of the summit of islands which have long since disappeared beneath the water of the ocean. Microscopic investigation has also shown that limestones of all descriptions are almost entirely of organic origin, and are frequently little more than highly altered coral-reefs; this too being one of the most wonderful and unexpected discoveries of the Victorian age.

Another wonderful development of the same period is exemplified by the researches carried on by means of dredging in the depths of the ocean, which have revealed to us the existence of a wonderful assemblage of animals and plants living in total darkness, so far as the light of the sun is concerned, but producing a kind of unearthly illumination by means of phosphorescent organs developed by many of the animals themselves. The fishes of the deep sea with huge phosphorescent knobs on various parts of their bodies, and long feelers endowed with the most acute sensibility of touch are indeed some of the most extraordinary and strange-looking creatures that it is possible to conceive, suggesting the phantoms of a troubled dream rather than denizens of our modern world. It must indeed be a weird realm, that of the ocean abysses.

\* In addition to the discovery of these totally new

types of phosphorescent deep sea fishes, the Victorian era has brought to light the important fact that a number of types of invertebrates, especially the sea-lilies, or crinoids, supposed to have been long extinct, or only lingering on here and there in the form of a few survivals, are really abundant in the deep sea. The dredging cruises of the *Porcupine* and *Lightning* during the summer of 1863, 1869, and 1870, and the voyage of the *Challenger*, which lasted from the end of 1872 till the early part of 1876, mark an epoch in the investigation of the products of the deep sea, and indicated the lines on which future work of the same kind should be carried. During the latter half of the reign, marine biological stations were established in many parts of the world,—notably at Naples—and these have practically revolutionised our conceptions of the nature and extent of the fauna of the sea. Nor have the investigations carried on at such stations been by any means solely restricted to purely scientific subjects; they have largely contributed to the improvements of our sea fisheries.

The results of the dredging operations carried on during special voyages or by the vessels attached to the biological stations brought to light a whole host of previously unknown types of invertebrate life; but to refer to them in detail would not only largely exceed the limits of our space, but would weary the reader without any compensating advantage. It must not, however, be forgotten that an entirely new development of the era is the investigation of the minute animals and plants living at the surface of the ocean, and constituting a peculiar assemblage of organised beings collectively known as plankton.

The larger animals of the explored portions of the globe were, of course, to a great extent known in pre-Victorian days. But it was only a few years previous to the commencement of the reign that Brian Hodgson brought to the notice of science, many of the animals of the inner Himalaya, and it was not till 1840, that Blyth named the great wild sheep of Tibet and the

Pamir, the species from the latter area being indeed only known by the horns and skull till the return of the expedition from Yarkand in the early seventies. During the sixties the explorations of the French missionary the Abbe David brought to light the existence of a host of previously unknown animals in eastern Tibet, the most remarkable of which is the bear-like short-tailed panda. Africa at the time her late Majesty came to the throne was practically unknown over the greater part of its extent, and it was not till the sixties that Paul du Chailla revealed to us full information with regard to the existence of the great man-like ape, the gorilla, in the dense tropical forests of the west coast. Numberless new types of antelopes and other mammals, to say nothing of birds and lower creatures have been discovered during the reign in Africa, but even if space permitted little would be gained by the enumeration of these. Nor have discoveries of new animals and plants been less numerous in other parts of the world, but to allude further to them would obviously be a matter of impossibility.

In the sciences of embryology and physiology the advances made during the reign have been enormous, these being rendered possible in many cases only by the improvement in microscopes which took place during the same period, and by the invention of the process of cutting thin sections of animal substances for investigation under the microscope. The great work of the German investigator Von Baer upon the development of animals was indeed completed in the year of her late Majesty's accession; but the whole of the epoch-making studies of physiology and embryology conducted by the late Frank Balfour were a product of the second half of the reign; his "Development of Elasmobranch Fishes" having been published in 1878. Detailed references to the advances in these branches of zoological science would obviously be out of place on an occasion like the present.

Although in the last quarter of the eighteenth century, the African traveller Sparman called atten-

tion to the remarkable resemblance displayed by a South African insect to a dead and crumpled leaf, the phenomenon of mimicry, that is to say, the imitation by one animal of the general appearance of another, or of a plant, in order thereby to escape the attack of its enemies, has been made known entirely during the period under review. So too has the object of the coloration displayed by many animals, although this is a subject in regard to which our knowledge is still in a very elementary condition.

The investigation into the life-history of microbes and bacteria, and the discovery of the important part played by these minute organisms in the rôle of nature are likewise to be laid to the credit of the Victorian era; and were indeed only rendered possible by the perfection to which the manufacture of microscopes and other instruments of research had been carried during the same periods. The benefits to the human race which have been already conferred by these and kindred discoveries are only a foretaste of what is to follow. But perhaps the crowning triumph of microscopic and physiological investigations of this nature is the connection now indisputably proved to exist between malaria and mosquitoes—a connection which was only fully proved during the last year of her late Majesty's wonderful reign.

Nothing has been said as to the intimate connection between the animal and vegetable kingdoms which has been proved to exist by investigations carried out during this period. Neither has space permitted any reference to botanical discoveries and advances, while but very little has been mentioned with regard to the work accomplished in connection with many groups of invertebrates. But to whatever side of biological science we direct our glance, we can scarcely fail to be almost overcome with astonishment at the amount of work accomplished, and the revolution of our conceptions in regard to nature generally which has taken place during the "record reign."

R. LYDEKKEE.

## A PRINCIPLE OF FAMINE RELIEF.

**F**ATE in the July of last year the monsoon was six weeks overdue in the land of famine. Early crops were withering, sown a few days previously by ryots rashly trusting in a delusive shower. The last few bullocks saved so far by expensive imported fodder were succumbing. The great relief-works were crowded with labourers. Hospitals and poor-houses were full of ghastly figures, the monsoon cloud hung low down in a brazen sky, and everything pointed to the beginning of a second and in some ways far worse period of the great famine.

But though the foe grew daily stronger, the defence system was complete, and the only insatiable need was for more men to officer the expanding line. Generally speaking the scheme was to confine distribution of relief to large works and poor-house centres. The main principle was that the genuineness of the demand for assistance should be automatically determined by distance and work tests, with a view to avoid the dangers attaching to indiscriminate charity. Poor houses in the main cities with their system of patrols scavenged up those who from idleness, weakness or prejudice escaped the meshes of the relief work, and were intended to insure that even the alien beggar should not starve. Help was given locally only to a small number of village servants, whose presence in the village was indispensable to the administration, and in rare cases to others who for special reasons had to be exempted from the work test.

The rigidity of the system was tempered by the fact that the distance test had at times to be abandoned, that the work test fluctuated from a penal minimum to piece work, and that the Government living wage was supplemented by Charitable Fund distribution of comforts to the deserving. The large works were under the dual control of the Revenue and the Public Works authorities, with the result that questions of high policy were de-

cided by the Revenue Department, but the whole machinery of the work (except the kitchen and hospital) was in the hands of Public Works Department officials.

Poor houses were managed by local, civil or municipal authorities.

Everything that the wit of man could devise, or his endurance execute, was done to develop the system on these lines, in view of a continuance of the crisis.

But a change suddenly occurred. From the Seychelles and Ceylon came glad news of a fresh break in the monsoon. Every evening the monsoon cloud spread over a wider horizon, till at last a white misty wall of driving blinding rain came inland, and the drought was over.

In a few days the brown cracked earth was a green swamp, cholera was being washed out of the villages, and the cultivator roused himself from the lethargy of despair, to mend his plough, and beg, borrow (or even steal) bullocks to till the land.

But with the end of one crisis, another began. The flank of the defences was turned, and the scene of operations had to be rapidly shifted from big relief works to village centres, where the struggle broke out afresh. The reason for this is obvious. The artificial towns round the relief works rapidly dissolved as the people hurried off, anxious to exchange the imperfect shelter of the huts for their own homes, and to make their preparations for cultivation. Instead of providing for applicants subsistence in exchange for work at conveniently chosen centres, Government had now to conduct local investigations as to the needs of people in remote villages, and arrange for the distribution of gratuitous relief in places often very difficult of access. Further, besides providing the means of present subsistence for the starving, it was imperative to place within the reach of all materials for re-commencing the operations on which the future depended.

The cultivator emerging from the struggle with starvation found that his victory was dearly

purchased at the sacrifice, possibly of health and strength, but certainly of cattle and seed grain. The whole machinery of cultivation was rusted, disorganised and broken, and the problem was to forge anew the shattered parts, and re-construct the whole, so that it might be in working order before the brief sowing time slipped away. Cattle had to be imported, fodder supplied, and seed-grain purchased for the ryot, while at the same time the watchful care, which maintained him on the relief work, had to be continued to him in his village. The difficulty of the double task can hardly be exaggerated. The work was physically very arduous, involving as it did much outdoor labour, and discomfort, first from rain, then from heat and finally from fever. The merits of the clamorous had to be enquired into, the needs of those who hid their sufferings in silence had to be brought to light, and constant precaution had to be exercised to prevent fraud and corruption. The system of Tagavi distribution needed a staff of officers who should be not only thoroughly honest, but conversant with a complicated system of accounts. The supervision of the free dole list demanded the same qualities, while infinite patience and humanity were required for the charitable fund work, and the saving of child-life.

Finally local knowledge was indispensable, in order to bring help within the reach of those, who maintaining themselves in ordinary times in impoverished respectability, when confronted with starvation, preferred rather to suffer the pangs of hunger than the degradation of seeking public charity. It is evident, then, that a highly organised body of specially trained and qualified officers was immediately needed to cope with this second phase of the famine problem. The work had of course to be done under the direct supervision and control of the Revenue Department, but the difficulty was to obtain the men. The supernumeraries who composed the P. W. D. subordinate staff on the big works, though they may have performed their own duties admirably, could hardly be metamor-

phosed at a moment's notice into the type of official required, and the ordinary Revenue staff was already overburdened with extra duties. Ultimately however the machine was constructed and got to work; the Revenue Department supplied the frame work and the rank and file were scraped together as best might be, but valuable time was necessarily lost, and important work had to be entrusted to unskilled men.

It is plain then that the difficulty which arose involves a serious question.

The change in the nature of the famine problem with the advent of the monsoon necessitates an alteration in the system of relief administration which amounts to disorganisation. For, without detracting in any way from the merit of those pioneers, who, working with desperate energy, hewed a new road through endless obstacles in place of a desert track, it must nevertheless be admitted that the difficulty of solving the second problem is intensified by the method of solving the first implied in the large works system.

What remedy can be proposed? The system of relief used during the first phase of the famine was framed in accordance with considerations of humanity and convenience, but on the basis of an economical theory that labour ought to be the price of food.

The nature of the policy required to meet the second phase is necessarily determined by the exigencies of the monsoon, and admits of no modification. Therefore the problem clearly stated is whether the former system can, without danger, be so modified as to harmonise in method with the latter, and whether it is possible to train up and utilise during the first crisis the body of men who are needed for the second.

Obviously it could be done by the substitution of small village works under complete revenue control for large works under dual control. The staff needed for supervision of these small works would be almost the same as that required subsequently during the monsoon for village inspection.

The only addition would be the professional help

needed for arranging technical details of the works. This element need, however, be but small, if confined to its appropriate duties of advice, and provided plans of work have been prepared previous to famine.

But experience shows that several difficulties stand in the way of so simple a solution of the difficulty. In the first place a common argument is that in the absence of a distance test and of a rigid work test, the small work system would degenerate into gratuitous relief with its result, demoralisation. Let us grant for argument's sake the first premise in order to join issue over the conclusion, that gratuitous relief means demoralisation. It is true that it is a principle of European poor relief that he who does not work shall not eat, and that it is demonstrably applicable to countries in which famine is so perpetually recurrent as to be almost normal. Such places may be found even in India; but in most parts of India famine is luckily so abnormal that the situation is not analogous to conditions prevailing in Europe which gave rise to the poor law system. Hence when framing regulations to deal with famine, we must avoid basing them on the principles which underlie normal social legislation. Subsistence has to be provided not for the professional beggar but for the professional worker, not as a permanent contribution by society to correct unequal distribution of capacity and wealth, but as a remedy for a sudden paralysis of human industry, which will be determined by the advent of the monsoon. There is no permanent inducement to laziness, which may tend to degenerate the *morale* of the nation, and thus the danger which lurks in poor law systems of the West has little to do with the question of famine relief in India. But the apprehension is that, if the cultivator gets gratuitous relief in time of famine, he will leave his plough idle when the monsoon comes, content with the assurance that a beneficent Government has undertaken to avert starvation from him for ever.

There are many reasons against this. Govern-

ment has revenue servants who are capable of convincing the cultivator that relief will cease when the time for gathering the first crop arrives. And the cultivator is not a fool. He has a clearer idea of the relations between himself and Government than many responsible officials possess. His sentiment leads him to pay assessment in the most docile manner in ordinary years, but he knows that he can only do it provided the paternal Sirkar shields him from peril in time of famine. And further there is the power of ancient custom, which we moderns always estimate too lightly, impelling the cultivator to the fields when the season brings the rain.

Is it likely that by giving alms to the suffering for a few short months, we shall obliterate the hereditary instincts which bind men to the land? Again, on the grounds of barest common sense, even supposing the ryot was sanguine enough to believe that by refusing to work he could make Government support him for ever, would he forego the rich harvests that he can secure in good years for a pittance from Government which will only just avert starvation?

Surely the danger of demoralizing the cultivator by gratuitous relief is exaggerated, and the primary object of famine relief is not to prevent pauperization, but to place the cultivator behind the plough at the beginning of the monsoon in the highest possible state of efficiency.

It cannot however be denied that a certain amount of demoralization is the inevitable result of any system of Government famine relief.

The substitution of a centralised administration for patriarchal control, while diminishing the local authority of the big cultivators over their dependants, must weaken also their sense of responsibility for them. When Government further acknowledges as an inviolable obligation its duty of preserving life, the landowners, who from interest or benevolence were wont to perform this duty more or less effectively, fold their hands and send their people to exploit the relief works. But it

does not seem probable that this danger would be greater under a system of gratuitous relief than under the large works system. On the contrary if local needs were gauged by the discrimination of local revenue officials instead of being tested by the offer of a paid labour on public works, it is possible that local resources might be more fully utilised in time of scarcity. In fact any step towards decentralization in method appears to be an advance in the direction of removal of the original difficulty.

But it may be urged that although a system of gratuitous relief administered with discrimination may not be open to objection, yet a more serious danger would lurk in the small work system as a veiled form of gratuitous relief granted on a false work test instead of at the discretion of responsible officials.

The reply to this is that one object of the small works system is that the work test should be supplemented by the discrimination of local officials. Actual supervision of the works must be in the hands of village officers and mustering clerks subject to constant inspection by the revenue touring staff. But without exaction of a rigid task it is quite possible to penalise idleness either by removal of the work to another village, or by dismissal of the idler.

The Revenue authorities can control the dole list so as to prevent starvation on the one hand and fraud on the other, and the control of the work list is not more difficult. Moreover, when the work is connected with the social life of the villagers, self-respect and public opinion operate strongly in a village to prevent people who do not need work from seeking it. Such sentiment is ineffective on a large work away from the village.

Still it cannot be denied that the outturn of work measured quantitatively would be less under the small work than under the large work system. But the primary object of famine relief is of course not to show a large outturn of work, but to save life without pauperization. It has already been argued that the danger of pauperization is perhaps

less important than at first sight appears to be the case. It remains to consider from an *a priori* point of view what are the comparative merits of the two systems as means of saving life.

Theoretically it is evident that people have greater resisting power both against disease and starvation when remaining in their own homes, than when herding in crowds on distant relief works. This applies especially to children, among whom mortality is so great during famine time. Dangerous exposure at the beginning of the monsoon is avoided, and there is no disastrous interruption of home life such as follows wholesale abandonment of the village. Finally if the village is the centre of distribution, it is possible to ensure that relief shall reach all who need it.

Under the large work system, on the other hand, there may be a considerable class of people who stick to their homes till the very last moment, and who, when compelled at last by starvation to seek the relief work, arrive in such a reduced condition that they fail to pick up strength again. Again, increase of task or reduction of wage on the big work, to suit conditions affecting the main body of workers, crushes the minority.

Secondly, on the score of economy, the small work system has advantages. It costs much less to feed people in their own homes than on a relief work, as butting expenses, and charges of water supply and conservancy are avoided. Moreover there are fewer opportunities for corruption, and both prevention and detection of such offences are easier when the revenue authority uses its own officials, who have reputations to lose for making payments. The revenue system with the village officer as the unit is an organization ready to hand, which only needs enlargement to undertake the whole famine work. It ought to be equipped with such a thorough knowledge of the people as to be able both to extend sympathy, and prevent fraud where necessary. It seems hardly economical to make small use of it, when attempting to solve the main problem of relief.

But hitherto as a matter of fact the small work system has not been used to any great extent in large famines. Various practical reasons, such as the absence of previously prepared plans for small works, the difficulty of organising the necessary staff on a sudden emergency, the superior facilities for commencing large works, and the problem involved in distributing grain over large areas, have combined to render the large work system more usual.

It is not within the scope of this article to discuss or to minimise these practical obstacles to the expansion of the village system of relief. But it is contended that, in view of the importance of the principle of which a vindication has been attempted, the surpassing of these obstacles is an object worthy of the utmost endeavour.

It is now some months since the great famine may be said to have ended, and the tide of life has begun to flow once more in its ancient channels. But long after the bare earthworks which scar the country side are toned down by Nature's hand, and the sites of the crowded burial grounds beside them are forgotten, such famines will continue to occur in India.

It is for us to hand down to posterity not merely the weapons with which we have combated the foe, but also our hard-earned knowledge of the weak points in our harness, and of the need of constant preparations for defence.

But side by side with the development of the theory of relief, is arising a theory of prevention which at some far distant date may remove the evil from its root. The evil consists of course in the hereditary indebtedness of the villager. It has been well described by the talented author of "Twenty-one days in India" as follows:—

"The debt of a village is almost unthinkable; its records lead us back into the financial twilight of cash payments. The Ganges has washed the ashes of a hundred generations of its 'bania' creditors into the ocean. No individual man can hope to live long enough to trace the records of its

accounts back to solvency. This requires an hereditary accountant striding along, like history, from father to son; and the debt sometimes outstrips the hereditary account."

It is unthriftiness born of debt, which renders famines possible in India.

The attempt which is now being made to establish the Agricultural Banks system may perhaps some day lead us on to a financial dawn of solvency. In Egypt where the same problem arose, an experiment made by the Government with the object of emancipating the "fellahcen" from the money-lenders, has had results which are particularly encouraging to us in India.


A compromise has apparently been effected between the banks and the revenue authorities by means of which the bank lends money, developing its business through local agents who get one per cent. commission. Then when the instalments become due, they are collected by Government officials along with the ordinary taxes.

It is by no means improbable, that in the success of the "Experiment" of Lord Cromer, may be found the key to the situation.

R. E. HOLLAND,

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#### LITERARY LIFE IN LONDON.

 EATED in Mitre Tavern near Temple Bar, Dr. Johnson is reported to have said "Sir, the happiness of London is not to be conceived but by those who have been in it. I will venture to say there is more learning and science within the circumference of ten miles from where we sit than in all the rest of the kingdom." One has only to visit London to realise the full significance of the words of the great lexicographer. And of all places in London, Fleet Street, the favourite resort of the immortal Doctor illustrates the wonderful literary activity of London. Walk through Fleet Street any afternoon, and you feel that at every step you are treading on literary matter. You see piles and piles of newspapers fresh from



the press, hurriedly finding their way out of the great newspaper offices. Posters with startling announcements stare you in the face. Newsboys cry the most important piece of news at the top of their voice. There is not a building, not a window which does not announce the name of some newspaper. And almost every shop is burdened with a charming variety of newspapers and magazines. There is a feverish anxiety on the part of every newspaper to obtain some fresh news and serve it hot. The cheaper the newspaper, the greater the chance of an enormous circulation, and it looks as if the day is not distant when no daily newspaper would dare to charge more than a half-penny as its price, no weekly review more than a penny and no monthly magazine more than three pence. Fresh papers and magazines are started almost every week and it is surprising how all these find a ready sale. Some of these, of course, perish for want of supporters, but others soon take their place: and there is a steady stream of literary publications which overflows and fertilises thirsting London. There are papers and magazines to suit different palates and different professions. And perhaps the wonder will be greater still when it is known in India that every line of printed matter which appears in these periodicals is paid for. It was only the other day that the proprietor of the latest addition to the list of daily newspapers announced in public that a single issue of his paper cost him £ 250 a day! And no wonder, considering that besides the actual cost of producing a paper, large amounts are paid to contributors. The payments vary according to the character of the papers. A few particulars, I dare say, may interest your readers. The *Daily Mail* and other half-penny morning papers pay a guinea and a half per column; the *Daily News* and other penny papers two guineas. The *Times*, however, sends you a cheque for ten guineas for an article. The *Evening Standard* pays two guineas, the *Westminster* a guinea and a half a column, and the *Pall Mall Gazette* £ 2—2 on an average. Paragraphs are paid for at the rate of

a penny, penny farthing or three half-pence per line. The *World*, however, pays six pence per line. The rate of payment by the magazines is entirely different. If one succeeds in becoming a regular contributor to the *Strand*, *Pearson's*, the *Gentleman's* or the *Pall Mall* one can do nothing better. These reward their contributors according to the merit of the articles or stories sent. The *Strand* does not hesitate to pay ten guineas for a short story. The *Cornhill* gives a guinea a page. The same rate of payments is observed by the *Nineteenth Century* and the *Fortnightly Review*. *Temple Bar* gives £ 5 for a short article. The *Royal Magazine* two guineas a page and the *Harmsworth* about the same. *Tit Bits* and *Answers*, two of the largest circulated weeklies, pay at a guinea a column of 1000 words. The *Graphic*, *Illustrated London News* and other similar papers pay a higher rate. The *Queen* pays a guinea per column and *Lady's Pictorial* half a guinea. An accepted article in the *Spectator* or *Saturday Review* brings in five guineas. It is indeed delightful to have one's articles accepted by any one of these magazines and periodicals which pay their contributors well. But literary men in India will be surprised to learn that very often one has to send one's articles a year in advance to have them published at the proper time in any of the well-known magazines. Six months' delay in publication is a very ordinary occurrence. An article meant to be published in December must be submitted at least in May. A great deal also depends on acquainting oneself correctly with the nature or character of a magazine before an article is sent in. An article may be very ably written, and yet it may be returned simply because the subject does not suit a particular magazine. Of Max Pemberton, the well-known novelist, it is said that he wrote a short story of a semi-historical nature and sent it to *Temple Bar*, and it was declined with thanks. Disappointed, he was about to commit it to the flames when the thought occurred to him that he might send it as well to *Chambers's Journal*. The story was at once accept-

ed. No man who aims at journalistic success here can afford to be sensitive. His contributions may be declined with thanks ever so many times; and yet he ought not to lose courage. Sometime ago, a young journalist related the experiences of the first year of his journalistic career, in the *Weekly Sun*, and in the course of it, he said:—"Turning to my lists, I find that I wrote altogether 134 articles, of which 83 were accepted, leaving a balance of 51. Of the accepted contributions, 43 got home at the first trial, 18 at the second, 10 at the third, 8 at the fourth, 1 at the fifth, 2 at the sixth and 1 at the seventh. It is evident from this that my pertinacity cannot bear comparison with that of a gentleman who lately confided his experiences of the *Author* who had a contribution taken at the fortyninth time." Another essential feature of success as a contributor to journals consists not so much in encyclopaedic knowledge as in knowing where and how to obtain information on a particular subject. A man who makes an assiduous use of such books as *Haydn's Dictionary of Dates*, *Chambers's Book of Days*, *Whitaker's Almanac* and similar publications will not find it difficult to earn an occasional penny in London. In this connection, I may be pardoned if I explain how I earned my first cheque in journalistic venture in England. A paragraph appeared in one of the morning papers about the visit of a well-known literary man to a portion of India with which I was well acquainted. As I happened to have some photographs in connection with the place, I wrote at once to an *Illustrated* paper asking whether an illustrated article about the place would be useful. I was asked to submit the photographs and my article, and so I did. As I had received no other communication for a week or two, I called at the office of the journal. I was told the article I submitted was too long: but the photographs were accepted and I was asked whether I knew anything about the literary man and whether I could write a short article about him and send it

in a couple of hours. I knew nothing about the man except that I had read one of his books. Nevertheless, I undertook to write the article and sent it on within the appointed time. I had earned my first cheque in London. I was pleased when I found that the cheque was for £ 1 11s 6d!

Literary activity in London is not confined to newspapers. There can be no literature without books, and publishers of books are as active as publishers of newspapers, though in a different way. Literary activity with regard to books is best seen not so much in the office of publishers or in bookshops as in an unpretentious building in Holborn, known as Mudie's Library. Naturally, those who read books are at least a thousand times as large as those who buy books; and the business transacted in Mudie's Circulating Library affords an unmistakable clue to the literary activity of London. Standing outside this library you may see any day between 10 A.M. and 6 P.M. a never-ending stream of men and women entering and leaving it book in hand. Every new book with the faintest claim to reputation is at once bought, and the number of copies bought at Mudie's is always an indication of the popularity of the book. The greater the demand from the public, the larger the number of copies, and the demand will not be great unless the book is very popular. Some books however achieve only a fleeting reputation. Mudie must of course purchase a large number of copies of such books though eventually the public may forget them. It is stated that Mudie once bought 3,500 copies of a book at 22 s. 6 d. each which subsequently turned out to be worthless and would not fetch even two shillings! The number of books taken out of his establishment every week is something enormous. From 1,000 to 1,200 parcels representing 5,000 to 6,000 volumes are despatched to subscribers in London every day. Besides this about 900 boxes of books are despatched by rail and 120 boxes are sent by carriers every week to country subscribers. Mudie's is not merely one of the

great centres of literary activity in London. It is also one of the great centres of the world. Thousands of books are despatched every week to different parts of the world. Austria, Germany, Russia far-off India—sleepy Madras included—and China still further, receive books from Mudie's; and among the institutions replenished with books from Mudie's are the libraries at Zanzibar and Mombasa, Sierra Leone and the Gold Coast, the Schools of Art in Australia, the Literary Institutes of New Zealand and the Mechanics Institute of Polynesia.

Another institution which indicates the literary activity of London is the library of the British Museum. I don't believe there is a more magnificent library in all the world than the one in the British Museum. And entering it on any day you would find about 400 men and women busily employed in consulting old books either with a view to writing new books or contributing articles to magazines and newspapers or satisfying their own thirst for information; and you will find among them people of all nationalities, of all ages and of all professions. You will find there, side by side, the budding politician carefully copying down some quotation from a forgotten speech, the young author persistently hunting after old books for new ideas, the laborious historian weighing the value of conflicting opinions, the newspaper contributor dishing up an article in hot haste, the aged professor clearing his philosophic doubts by repeated references, the scientist, the mathematician, the poet, the American, the German and the Indian! What a variety of human faces and what a variety of tastes! The literary activity of London is indeed something prodigious!

G. P. PILLAI.

### MALABAR AND ITS FOLK.

BY

T. K. GOPAL PANIKKAR, B.A.

WITH AN INTRODUCTION BY

Rev. F. W. KELLETT, M.A. F.M.U.

PRICE—ONE RUPEE.

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### THE THREE AGES OF MAN.

*"Youth is a blunder: Manhood a struggle: Old age a regret."*—*Earl of Beaconsfield.*

#### YOUTH

Bright is the sky at morning,  
And brighter still  
The hope that in us dwells.  
The steep hill  
Of life's sad journey,  
Appears to be a pathway,  
Easy to travel and lined with blossoms gay;  
A prospect of delight:  
A vision full of beauty:  
"And beauty is a joy for ever."  
The stern monitress—Duty  
With knitted brow and beck'ning hand,  
Is not in sight;  
And while we blunder onward,  
The world seems full of light.

#### MANHOOD.

'Tis noon! the flowers have faded;  
Thorny, the pathway seems,  
And full of snares;  
Yet Hope hath found a tongue,  
And whispers—"Forward—  
On the summit is Success."  
We listen, and tho' experience teems  
With disappointments,  
And clouds darken our horizon, onward  
We do struggle—grappling with Destiny!  
The pleasures of the senses  
Do not pall—as yet! The lust of life,  
Of battle, is strong within us;  
And the treasure we would win,  
We think, and rightly think, is worth the strife.

#### OLD AGE.

'Tis evening! and the voice of Hope,  
Which led us on, is silent!  
And yet, we marked not when it ceased!  
Behind us, lies the path we travelled on;—  
That beyond,—is but a step! still,  
We fain would linger on our journey:  
The ties of earthly passion—  
Of friendship, love and wealth—  
Are strong to break!  
Memory is our sole refuge from Despair,  
And life's one long regret!  
Thus make we moan;  
Till Time, with noiseless tread,  
Overtakes us ere we know it,  
And blends us with the—Dead.

A. P. SMITH.

## THE BRITISH MONARCHY.

IN studying the history of the English constitution perhaps no fact is more striking than that, while hardly any institution in it cannot trace its origin to some primitive form in a remote past, at the same time its relative importance and the value of the functions it performs have undergone complete change. We find, for instance, that one division of the modern High Court of Justice springs from a Board of Revenue established by the Plantagenets and another from the practice of the king deciding appeals in his own person, that the militia, now a semi-regular armed force recruited by voluntary enlistment originated in the obligation, fully recognised in Anglo-Saxon times, lying upon all able bodied men to bear arms for the defence of the kingdom, and that the august House of Commons itself was originally nothing more than a body of delegates summoned to give information to the king as to the taxable resources of the country. Of no part of the constitution is this more true than of the monarchy. In early times the king was expected to be the leader in war, the active head of the administration, and the initiator of all measures for national safety and development. Now it is an accepted maxim that the king reigns but does not govern. The forms of monarchy have been retained, and much of its spirit too, while the system of Government does in fact give as much weight to the will of the popular majority as is possible under the most carefully devised republican constitution. The British Empire presents in this respect a curious contrast to its only rival in history. The Romans hated the name of king, but for centuries prospered under the rule of the Cæsars. England's greatest pride is in her monarchy while her constitution is essentially democratic. My object here is to briefly trace the steps by which the monarchy, while preserving its form, has chang-

ed its character, and to make some attempt to show its value to the Empire, especially as exemplified in the person of our late revered Queen.

I remember a debating society orator declaring that the House of Lords sprang into existence in the trackless wastes of Central Asia. The remark was intentionally extravagant, but the fact remains that nobility, as understood among all the peoples we class as Aryan, implying purity of blood and prowess in war, is an institution that must have made its appearance very early among the original stock of those peoples. Monarchy comes somewhat later, as a kind of necessary excrecence on a peerage or a Kshatriya caste, produced by successful warfare. In war, a leader is necessary and the primitive device seems to have been to elect one for the campaign or expedition immediately in view. A successful general could consolidate his authority and found a kingdom. It is thus that monarchy makes its appearance in English history. The Anglo-Saxon war leaders, probably chosen as Tacitus describes the Germans choosing their generals, founded one after another the seven or eight kingdoms of Saxon England. Among these first one and then another became prominent till the West Saxon line of kings established their single rule. Then came the Danes and for a time the English monarchy was absorbed in a Danish Empire, but was restored in the person of Edward the Confessor. Even in these early times the essential characteristics of the English monarchy appear. It is in the first place not "of right divine." The king is first among his peers, the noble class. He was elected by them assembled in council, from the royal family, and although a preference for primogeniture early appears, there are several instances of the direct heir being set aside in favour of an older or a stronger man. The king is not the source of law. This consists principally of ancient custom—the common law of England—nor is he the lawgiver; such legislation as was undertaken needed at least the co-operation of the Witan. He is however the head of the administration, forms with

the Witan a final court of appeal; although justice throughout the country is not his justice, it is administered by the people in their local assemblies of the shire, the hundred, and the township; he is also the head of the military and naval forces, and is expected to take the initiative in all state affairs, and to represent the nation in dealing with foreign states.

The Norman conquest did not greatly change the theoretical character of the monarchy. William the Conqueror posed as the successor of Egbert, and based his claims on election rather than on conquest. The feudal system seems to mark a great change, but feudalism existed largely under the Saxon kings and the change was rather that of persons than institutions, Norman barons to a great extent taking the place of the Saxon Thanes. Under the Normans however there was undoubtedly an extension of the administrative influence of the king. William the Conqueror's famous device of making all landholders hold directly of him helped this, and the compilation of Domesday Book, the first known attempt at a statistical account of the kingdom. It was under the Plantagenets however that the mediæval monarchy reached its highest development.

Henry II was the first great administrator after Alfred. Under him nearly every branch of government, as we now understand it, was brought under the royal control. He established a Revenue Board, (the Court of Exchequer,) a High Court (the King's Curia), and a system of criminal justice administered by his own representatives. He kept within bounds for the time being the local power of the feudal nobility, and he organised and armed the national army. Troubled times followed his death, and under the worst, the most indifferent and perhaps the most incompetent of English kings, John, Richard I., and Henry III., the English monarchy seemed in danger of total extinction. This period is intensely interesting in many ways. It produced the Magna Charta, the first attempt to formulate in a written document the law and cus-

tom of the constitution. It saw the distinction between Englishman and Norman finally disappear, and in it Simon de Montfort and his barons made it clear that England was not to be a mere appanage of a French prince but an independent island kingdom.

In Edward I., I venture to say, we have the first English king, because it is clear that England and English, as we now use the words, have a very different meaning from what they would have had if our history had not, in the middle ages, been so completely interwoven with that of France. In the two centuries or so that followed, the Norman conquest that blend, so to speak, of the Teuton and the Gaul gave to the ruling class of England those qualities that made it neither German nor French but something combining many of the excellences of both nations. Under Henry III we find this ruling class taking a decided nationalising line. The Barons' war was very largely due to Henry's inability to recognise the existence of an independent English nation. He seems to have regarded his kingdom as a convenient base from which he might extend his possessions and influence on the continent. He had not the ability to do this in an effective manner and succeeded only in wasting money on his wife's favourites and foreign churchmen and in trying to get his son Richard acknowledged king of the Romans. He sufficiently neglected the real interests of England, however, to get himself deposed. Edward I., was the first English king because he thoroughly recognised the fact that no man need have a higher ambition than to rise to the full height of such a destiny. He not only worked hard to organise the country by a comprehensive scheme of legislation, but he formed the project of uniting the whole island under himself, was successful as regards Wales and was probably only prevented by death from annexing Scotland. But while his policy consolidated the English nation, it prepared the way for diminution in the power of the Crown. War wants money, and the king, principally with a view to his exchequer, summoned towards the end of his reign the first

complete Parliament of the Three Estates. Some results of this action, as affecting the power of the Crown, were very soon seen. The principle that the redress of grievances must precede money grants was early established. Edward II's hopeless incompetence, Edward III's squandering of the national resources in the attempt to conquer France, and his corrupt Government led to revolution under Richard II., and Henry IV came in with a distinctly parliamentary title. The result was a very rapid growth in the power of Parliament and especially of that of the House of Commons. Under the long minority, followed by the half imbecile rule, of Henry VI., the nobility, most of them intimately connected with one or other of the ramifications of Edward III's large family, got quite out of hand. The long Wars of the Roses followed and the monarchy emerged from these contests with vastly increased power. The causes of the Tudor despotism, as it has been called, have been variously estimated. The diminution in numbers of the House of Lords caused by the war, and made more marked by the abolition of the monasteries which did away with the mitred abbots who had previously sat in the House, partly accounts for it, and also the acquiescence of the nation, tired of the disorders of the factious nobility. It was however due a good deal to the settled policy of the Tudors. Henry VII. sought to strengthen himself by foreign alliances, and avoidance of foreign war, and by accumulating hoards of money. Henry VIII with the spoils of the monasteries raised up a new nobility pledged to his personal service, and took as his ministers men of great ability like Wolsey and Cromwell, however obscure their origin. His church policy too was popular and he took the fancy of the mob with his gallant bearing and profuse luxury. He seems also to have invented the device of packing the House of Commons. Some of the rotten boroughs of the Reform Bill time received writs first from him, and were rotten from the beginning, in the sense that they were enfranchised for the express purpose of

returning courtiers who would vote solid for the king's measures. The Star Chamber was another institution by which the monarch maintained his personal authority. If you will imagine in this presidency the members of the Governor's Council, reinforced by one or two Judges of the High Court, and a few zemindars of proved subservency, forming a kind of committee to punish with fine or imprisonment, after a secret enquiry, everybody who said or wrote a word about government that government did not like, you will have a pretty good idea of what the Star Chamber was and how essential its work was in maintaining the Tudor despotism. The Court of High Commission was a similar institution for securing the sovereign's ecclesiastical supremacy. A large body of spies and informers kept these courts supplied with work, and men of any position must have gone in daily fear lest a chance word or a meeting with some suspected person should bring them within the power of these gentry.

It is curious that this despotism, which owed its existence largely to the Reformation, should have broken down because it would not carry the changes in religion as far as the extreme Protestant party desired. I do not mean to try here to estimate the relative importance of the various causes of the great contest between King and Parliament under the Stuarts. For my present purpose it is enough to note that, while the power of the monarchy was greater than ever before under the Tudors, after the series of events that culminated in the Restoration, that power was seriously curtailed, both by the removal of powers from the King and the increase of the powers of Parliament.

The actual restriction of the King's power did not amount to much more than the abolition of his oppressive and illegal Courts of the Star Chamber and High Commission and the enforcing of the long established constitutional doctrine that taxation is only legal by Parliamentary consent. The gain to Parliament was that the House of

Commons, from being a consultative body only occasionally summoned, became a permanent and essential part of the machinery of Government. This result was not obtained by legislation so much as by the force of circumstances. In old days the crown had an income from crown lands and other sources that was expected to meet the ordinary expenses of Government. The mediæval theory was that "the King should live of his own" in a general way and only come to Parliament for money for extraordinary expenses, usually for war. The civil war had impoverished the monarchy and a large income from customs granted for life, Star Chamber fines, monopolies, and the like extralegal sources of income had been lost. Consequently, Parliament had to be continually summoned to provide money for carrying on the Government. The result of this is shown by the permanence of Parliament for the first twenty-one years of Charles II. Parliament seems however hardly to have grasped the strength of its position. It commutes the feudal dues of the crown for an excise that brought in £ 1,200,000 to the King *for life*. This Charles supplemented by selling himself to France and for the last four years of his reign summoned no Parliament. Only after the Revolution of 1689 was the monarchy made absolutely dependent on Parliament for money, and a scarcely less important principle enforced—that of Parliamentary control of expenditure. The revolutionary settlement, however, did more than this. It was, for one thing, a most impressive re-assertion of the Parliamentary title of English sovereigns, and the Act of Settlement, by virtue of which the present dynasty reigns, was, since a Protestant nation must have a Protestant sovereign, its necessary corollary. It declared that the sovereign is in no respect superior to the law, that any standing army is not the King's but the nation's, that elections to, and debates in, Parliament should be free, and that juries should be impanelled in every trial. In fact, taught by experience, the framers of the Declaration of Rights tried

to provide against every possible abuse of the royal power: and their success is proved by the fact that no king since James I., has been accused of any attempt to wrest the law to his authority.

It must not be supposed, however, that the result of the revolution settlement was to assign to the monarchy its present place in the constitution. The sovereign still retained most important powers and was expected to use them. The command of the army, the direction of foreign affairs, the general oversight of the administration, the summoning, prorogation, and dissolution of Parliament, the acceptance or rejection of bills passed by Parliament, the bestowal of honours, such as peerage and knighthood, were still regarded as personal duties of the sovereign.

Now these powers are either in abeyance or are exercised by the responsible ministers of the crown, no doubt often enough in consultation with the sovereign, but it cannot be doubted often enough also in a manner different from what his own personal inclinations would dictate. We find in fact that within a century and a half of the Revolution the principle of ministerial responsibility was so firmly established that the acts of the king's ministers though done in his name were practically not controlled by him at all.

To go fully into the manner in which this change has come about would take too much time for this occasion. Some points may be noted. In the first place effective ministerial responsibility is a natural result of the permanence of Parliament and the position of ministers as members of that body. It was by no means immediately, however, that this was recognised. For a long time ministers were regarded as in fact the ministers of the king, liable to impeachment for actual wrong doing, but not bound to resign in face of a hostile vote of Parliament, and liable to dismissal when the king chose, even although they had the confidence of Parliament. It is also noticeable that during the 18th and early part of the 19th century the power of the Crown fluctuates. This is a good deal

due to the personal circumstances of the sovereign for the time being. George I. and George II. were Germans and were more interested in Hanover than in England. George I. did not even know English. Consequently under the first two Georges the power of the Crown declined a good deal. The power of refusing assent to Acts of Parliament fell into abeyance and has never been exercised since. The minister for the time being, Walpole, for instance, seems to be minister, because he is supported by the House of Commons. More properly however, he may be said to have been supported by the House of Commons because he was minister. This position gave him control of the patronage of the Crown. This consisted in the power to give sinecure and other places in return for votes. He had moreover funds that could be, and often were, used for direct bribery. He also enjoyed a considerable prestige as minister of the Crown, and opposition to him was regarded in a sense as opposition to the Crown. It followed that in practice the support of the Crown was of more consequence to a minister than the approval of the House of Commons. On the whole what the Crown had lost in direct power in the eighteenth century it regained, and perhaps something more, in the indirect influence it could exert. It should be noted that there was, after the Hanoverian accession, no real balance of parties. The Whigs were supreme; to be a Tory was the same thing as being a Jacobite. Consequently the struggle for the king's favour and ultimately for office was one between the Whig factions and individual leaders. Of course the possession of a large number of pocket boroughs, the votes from which would swell the ministerial majority would be a strong recommendation to a man ambitious of office.

George III. proclaimed on his accession that "he gloried in the name of Briton." The days of German kings relying on Whig support and of Jacobite scares, were passed: and the king found himself able to increase his power by bringing the

Tories back to political life. It was in his time that government by influence reached its greatest development.

The first blow to government by influence was Burke's economical reform, by which the sovereign and the ministers lost a large amount of patronage. This, however, though it lessened influence by no means abolished it. The latter half of the 18th century was a period of great industrial and commercial development. The country grew steadily wealthier, the party in the House of Commons in favour of real representation and the independence of Parliament grew stronger. Moreover as wealth increased, members were less amenable to corruption, and it was an age of improvement in public morals.

These tendencies culminated in the revolution, for such it was, though in a peaceful form, of the passing of the First Reform Bill. Its opponents realised, possibly exaggerated the enormous change it would make in the constitution. The Duke of Wellington continually asked, how was the King's Government to be carried on? He saw that with a really elected House of Commons the old methods would be useless. That they had already broken down was of course proved by the passing of the bill in the Commons at all. It was in this connection that the monarchy made its last attempt to preserve its position of at least equality with the other estates of the realm. William IV. resisted the demand of the House of Commons to swamp the House of Lords by calling up new Peers who would support the bill till civil war was imminent. His yielding to ministerial advice backed by an overwhelming force of public opinion solved once for all the problem, where in our constitution of checks and balances does sovereignty finally reside? The king and the Lords had to acknowledge that in the last resort they are powerless in the face of popular resolve, and the working out of the modern system inevitably followed.

Under that system the principal ministers of the Crown form a committee called the Cabinet, which



conducts and is responsible for the main business of the nation, while each individual minister supervises the business of his own department. Ministers are invariably members of one of the Houses of Parliament and all the ministers at any time belong to the same great party in the state. They are still appointed by the sovereign, but since it is impossible to carry on Government in opposition to the will of the House of Commons, the sovereign is practically obliged to appoint as ministers the leading men of the party which has the majority in the House of Commons. If the ministry is defeated in the House it can resign or appeal to the country. In the latter case the sovereign dissolves Parliament, and according to the majority returned by the electors, the ministry remains in power, or the sovereign sends for the chief of the opposite party and entrusts him with the formation of a new ministry.

Even from this brief and imperfect sketch of the history of the monarchy it will, I hope, be clear that that history has not been one of anything like continuous decline in power, still less in importance. Leaving out of account those variations in effectiveness that the institution has undergone as the necessary consequence of differences in the ability and strength of character of successive sovereigns, we note certain epochs of growth and decline. The monarchy grew in power and importance while the Plantagenets were bringing all branches of the administration immediately under themselves. It lost very much under the Lancastrians in the curious, and as it proved, premature development of the Parliamentary system. It recovered, and more than recovered its lost ground under the Tudors. It disappeared entirely for a time in the Stuart troubles, but at Charles II's death had for the moment regained nearly as much power as under the Tudors, and it emerged from the Revolution, restricted in its functions, but still a leading factor in the administration of Government. Under the first Georges it suffered something of an eclipse. But George III., though he

kept on the windy side of the law, raised it to such a pitch of influence that he was able entirely to block Catholic emancipation, and make and unmake ministers at his pleasure.

The modern system of ministerial responsibility in its completest form resulted from the passing of the Reform Bill, and it was well established when our late Queen ascended the throne, and we may therefore say that the constitutional position of the monarchy underwent no change during her reign. The sovereign is no longer expected to administer any department of state, still less to control the administration of the whole. This work is in the hands of his ministers who, as I have already explained, are now regarded as being responsible to the nation as represented in Parliament. It may be asked then what useful purpose does the monarchy serve? And it is now my business to try and answer that question.

In the first place it must be remembered that by a gradual process of evolution we have arrived at the system which is called party Government. The history of that system would demand a lecture in itself. It is enough to note now that there are in the State, and have been for centuries, two parties which for the greater part of the nineteenth century were known as Conservative and Liberal. These names imply an opposition based in a fundamental difference of temperament and of political ideals; the Conservatives are supposed to value the preservation of what is valuable in our institutions so much as to view with suspicion any attempt to change them. The Liberals on the other hand are of a more adventurous turn of mind and will take the risk of disturbing what is of proved utility in the hope of effecting real reform. It might be plausibly argued that existing parties do not differ from one another in this way. The Conservatives for instance have themselves effected more sweeping changes than the Liberals have dared to contemplate. Perhaps this is so, and the ties that bind the members of each party together are rather those of long and generally hereditary association with the

one, and opposition to the other, than those of community in abstract political faith. In any case the fact remains that as a poet has sung,

Every boy and every girl  
That's born into the world alive  
Is either a little liberal  
Or else a little conservative.

This being so, the existence of parties in Parliament and the tenure of power by each in alternate periods has been in the past century a predominant fact in our political system. It is easy to see how grave evils might arise from this system. I will mention two. Firstly, every change of power from one party to another, and such changes appear inevitable, might be accompanied by serious political disturbance, and secondly, the changes of policy incident to the transference of Government from one party to another might mean a serious breach in the continuity of the nation's foreign policy.

The existence of the monarchy does much to prevent both these evils. It is an institution of peculiar permanence. Recent events have sadly impressed on our minds that even in the best loved sovereigns "nature's copy's not etern." But in law and fact the throne can never be vacant, the demise of the Crown implies a new succession. The hereditary principle is also a strong guarantee that the successor will in inclination and sympathies carry on the traditions of his house. This permanence gives the Crown a commanding position above party strife. It is not the creation of any party, nor does it depend for support on one party rather than another. At times of party crisis then, when it is plain that the nation demand a change of Government, the Crown is in the best possible position for carrying into effect the nation's mandate. Moreover the monarchy is not only permanent, but it is an institution that commands the veneration of all men, and it is of extreme value that in the delicate and often difficult task of constructing a new ministry, the chief minister should have the weight of its influence in the distribution of places among the party leaders. In

foreign politics the preservation of continuity, notwithstanding change of parties, is of course largely secured by the routine work being entrusted to a department consisting of permanent officials—the Foreign Office. There can be no doubt however that the foreign minister for the time being is immensely assisted by the sovereign. In the case of our late Queen this was of course particularly the case.

Lord Rosebery thus described her position among the sovereigns of Europe.

"Have you realised what the personal weight of the late Queen was in the councils of the world? She was by far the senior of all the European sovereigns. The German Emperor was her grandson by birth. The Emperor of Russia was her grandson by marriage. She had reigned eleven years when the Emperor of Austria came to his throne. She had seen two dynasties pass from the throne of France. She had seen, as Queen, three monarchs of Spain, and four sovereigns of the House of Savoy in Italy. In all those kingdoms which have been carved out of the Turkish Empire, she had seen the foundation of their reigning dynasties. Can we not realize then what a force the personal influence of such a sovereign was in the troubled councils of Europe?"

It may be added that there is hardly a court in Europe with which our own royal family is not intimately connected by ties of blood or marriage. The Queen's prolonged life must have made her a perfect repository of the intricacies of foreign relations, particularly of the personal kind. This knowledge and experience were always at the disposal of her ministers, and it is well-known that no despatch of any importance was allowed to leave the Foreign Office till the Queen had seen it. Lord Salisbury and Lord Kimberley lately spoke very plainly in the House of Lords about the relation of the Queen with her ministers.

"She always maintained, and practised a rigorous supervision over public affairs, giving to her ministers her frank advice and warning them of danger if she saw there was danger ahead; and she certainly impressed many of us with a profound sense of the penetration, almost intuition, with which she saw the perils with which we might be threatened in any course it was thought expedient to adopt.....and I may say with confidence that

no minister in her long reign ever disregarded her advice or pressed her to disregard it, without afterwards feeling that he had incurred a dangerous responsibility."

He also spoke in warm terms of her exercise of her power with foreign courts and sovereigns to remove difficulties and misapprehensions which sometimes might have been dangerous. Lord Kimberley also bore witness to the Queen's beneficent influence in foreign affairs, and related an anecdote of how on one occasion when the ministry acted contrary to her advice, he had to confess to her "Well Ma'am, I am bound to admit that your judgment was sounder than my own." It may of course be said that this was personal to Queen Victoria and that not all sovereigns are capable of serving the country in the same way. This is of course to some extent true, but it is unlikely that the family connections of our own with continental royal families will, in the future, be less close or numerous than now, and though it may be long before another sovereign rules who unites experience and wisdom in an equal degree with our late sovereign, we may reasonably count on the monarchy continuing to perform a very useful function in the transaction of foreign affairs.

The monarchy however has a part of active beneficence to play in the constitution of a scope so far-reaching and fraught with momentous consequences as to make the more or less efficient discharge of the specific functions that I have dwelt on, of somewhat minor importance. The monarchy has always been, and we trust will always be, at once the meeting point of all national and imperial interests and lines of development and the glorious symbol of our national existence and unity. It is hardly a century ago that motions were put in the House of Commons, "that the power of the monarchy has increased, is increasing and ought to be diminished." Mr. Balfour no doubt intentionally echoing these phrases said in the same place :—

"In my judgment the importance of the Crown in our constitution is not a diminishing but an increasing

factor. It is increasing, and must increase, with the growth and development of those free, self-governing communities, those new commonwealths beyond the sea, who are bound to us by the person of the sovereign who is the living symbol of the unity of the Empire."

To the people of India this aspect of the monarchy appeals most strongly. We are all proud of being subjects of the King, and no doubt not the less so that his special relation to this country is emphasised by his imperial title. It is natural that in a country where the highest type of beneficent rule is that of benevolent despotism, monarchy should be honoured in the abstract, and our late Queen's profound interest in the welfare of India, and determination that it should be governed for the benefits of its peoples caused her name to be known to and revered by millions who have no idea whatever of the complicated system of checks and balances known as the British constitution. The knowledge of the better informed that final sovereignty rests under the constitution, in the people of Great Britain as the elector of the House of Commons, will not diminish their reverence for the monarchy or their attachment to the sovereign's person, because they will recognise that, while constitutional checks guard them effectually against any possibility of abuse of power on the sovereign's part, he is yet, although he does not personally control the administration, in a position to exercise in a degree which is incalculable, because its workings are necessarily not made public, a beneficent influence on that administration. We cannot doubt that in Edward VII we have a king whose every endeavour will be directed to securing for India a continuance of the just and enlightened rule inaugurated by the Proclamation of 1858, and while we shall never cease to hold the memory of Queen Victoria in affectionate reverence, we look with perfect confidence to a continuance under her successor of that anxious care for the welfare of India which so distinguished her.

J. H. STONE.

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## THE BEGINNING OF THE KALIYUGA.

THE heroes of the Mahabharata War and the chief incidents connected therewith are matters almost of daily conversation even in the remotest corners of India. In most of the Indian villages the wars are fought over again and again in the rude, but powerful, nightlong dramatic performances. The most illiterate villager of the poorest hamlet knows, or thinks he knows, something of the great Pandava heroes. The annual Dharmaraja festivals serve to freshen his untrained memory and to stir up his dormant feelings. The cultured Brahman on the other hand, who piously recites, day after day, portions of the Bhagavad Gita, that marvellous episode in the great Indian epic, is daily reminded of that great conflict which ushered in the modern or the Kali Age. Yet, educated India cares seldom to enquire into the question of the date of the War with even a little of that historical spirit which above everything else distinguishes the European from the Hindu.

Not that materials are wanting to guide us in our attempts to arrive at the truth. Nor is it even that Hindus of requisite ability and knowledge are lothe to tackle such problems, a solution of which would be most heartily welcomed by every lover of India. Rather it is that false pride which refuses to question long-cherished opinions and which is unwilling or feels greater pleasure in treating events as of the remotest antiquity. Sometimes it is that new-fangled mysticism which aims at giving impossible explanations of every pre-existing opinion or prejudice. When the atmosphere is so ill-suited, the light of history cannot illuminate the dark labyrinthian passages of the Ancient Chronology of India. What India is now in need of is that faculty of scientific intuition which should divest itself of any tendency that might stand in the way of historical veracity. It is the humble purpose of the writer to dispassionately discuss such materials as may be forthcoming, in order to draw therefrom certain conclusions respecting the date of the War and the chronology of Ancient India.

The date of the war is, as is well known, mixed up with the system of Yugas about which many learned scholars have hitherto written. The pre-

sent Yuga began soon after the great war was fought in the holy plains of Kurukshetra; and if it be possible to arrive even approximately at the date of the War, the riddle of the Yugas, which has hitherto baffled the ingenuity of learned scholars, will have been in a manner solved.

Was the War an historical event or is it a mere allegory? Almost all scholars\* are agreed that a great War took place between the Kurus and the Panchalas very long before Gautama Buddha was born. They have no doubt that the epic narrates truly, though rather extravagantly, a war that waged with disastrous results in the northern parts of India. "There can be little doubt," says Professor Macdonnell, "that the original kernel of the epic has, as an historical background, an ancient conflict between the two neighbouring tribes of the Kurus and the Panchalas who finally coalesced into a single people."† Lassen‡ thought that the epic narrated an actual conflict between the Kurus and the Panchalas, the latter under the leadership of the Pandavas, ending in their mutual annihilation. Weber§ says that "one thing is clearly discernible in the Mahabharata, that it has as its basis a War waged on the soil of Hindustan between Aryan tribes and therefore belonging probably to a time when their settlement in India and the subjugation and Brahmanisation of the native inhabitants, had already been accomplished." It may be idle at this late hour to establish by arguments what has been already conceded by scholars that the main plot of our epic is based on history. It is an easy pastime to deny the truth of the events of the past; but strangely enough it is often difficult to prove their actual occurrence. Did not the late Archbishop Whately, the famous logician, prove conclusively that the great Napoleon had never existed? Yet, that hero of many fights it was that more than anybody else shaped the fortunes and altered the map of many a country in the dawn of the century that has now expired. The lesson that the learned divine so humorously teaches must not, by us, be lost sight of, in dealing with the new order of sceptical critics whose erratic genius takes the greatest pleasure in denying the fundamental basis of the Sanskrit epic, in whose truth nearly a seventh of the human race sincerely believes.

Nor are the chief characters and the principal incidents of the War merely poetic fictions. It is

\*R. C. Dutt's Civilisation in Ancient India Vol. I page 10. Weber's Indian Literature, page 187.

† Sanskrit Literature, 285.

‡ Weber's Indian Literature, 135.

§ Weber's Indian Literature, page 187.

ridiculous to suppose that an epic with such strong characterisation could be a fabrication of an ingenious mind, at any rate, in India. It needs not much knowledge of Sanskrit literature to discover that the heroes and the heroines of standard Indian works are almost all of the same type. The tame-ness of similarity is a standing reproach against Sanskrit dramatic literature. But as for the Mahabharata, what wealth of characterisation, what artistic delicacy of touch, what depth of human interest, all depicted in the most natural manner and without the slightest appearance of effort! "In the Mahabharata human interest everywhere preponderates, and a number of well-defined person-ages are introduced, to whom the possibility of historical existence cannot be denied." \* The high-souled Karna, for instance, loyal and generous but vain and boastful; Yudhishtira, the good and the wise, but fond of dice whose dangers he had the intelligence to understand, but whose temptations he had not the strength of will to resist; the lion-hearted Bhima, righteous but vindictive; the chivalrous Arjuna and the cultured Sahadeva; the politic Sri Krishna and the downright Balarama; the Royal sage Bhishma and the Brahman warrior Drona; the impetuous Asvathaman; the envious Duryodhana and the unprincipled Sakuni; the imperious Droupadi and the faithful Gaudhari;—every one of these so unlike every other. There is no attempt in all Sanskrit literature at such matchless character painting. But the epic is based on a substratum of historical facts and therefore successfully accomplishes what no other work in all India has ever attempted. Visakha-datta's Mudrarakshasa is indeed a feeble exception, but here again the plot is borrowed from real history.

Furthermore, let a traveller pass through any tract in India from the Himalayas to the Cape? from Kathiawar to Burma; he is confronted everywhere with striking evidence that the Pandava princes are still held in the deepest veneration by the Brahman and the Jain, by the cultured races of the plains and the primitive tribes of the hills. The influence of a got-up poem may affect the literate classes, but not the simple rustics inhabiting hilly isolated regions. Unless the main events of the war had actually taken place, the influence of an imaginary epic, however grand and however thrilling, cannot take the leading place in the hearts of the untutored millions of India.

It is well known that the five Pandava heroes married a single maiden, the Panchala Droupadi. "The description of the transaction represents it as

one which was opposed to public opinion and which was justified more by very remote tradition than by existing practice." \* The epic represents Drupada, the father of the lady, as having been shocked at the proposal of all the princes marrying his daughter. Undoubtedly, as Professor Max Muller† remarked, the epic tradition must have been very strong to compel the author to record a proceeding so violently opposed to Brahmanical law. If the characters and the incidents of the epic were purely mythical, how comes it that the compilers thereof thought it proper to give special promi-nence to such an un-Aryan practice?

In the oldest of the Vedas the names of the two royal brothers Devapi and Santanu are mentioned, the latter of whom was the great grandfather of the Pandavas and the Kauravas. In the Aitareya Brahmana and in the Satapatha Brahmana Janamejaya Parikshita, the great grandson of Pandava Arjuna, is mentioned, and from the latter work we may also gather that Janamejaya and his three brothers Bhimasena, Ugrasena and Sutasena had died shortly before its compilation. Professor Weber‡ says that in the Kathaka Samhita, a Sakha of the Black Yajurveda, mention is made of Dhritarashtra Vaichitravijaya and the contests of the Panchalas and the Kounteyas. The Taittiriya Aranyaka mentions Vyasa Parasarya and his pupil Vaisampayana, the former of whom was the actual father of Pandu and Dhritarashtra; and the family of the Parasaras is mentioned with especial frequency in the Vamsas of the White Yajus. Parasara and probably also his son Krishna (Vyasa) are the authors of a few hymns of the Rigveda. The Asvalayana and the Sankhyayana Sutras and Panini mention the words 'Bharata' and 'Mahabharata'. Panini 'who cannot be assigned to a date later than the fourth century B. C., and whom Goldstucker places in the ninth or tenth century B. C., speaks of Kunti, Yudhishtira, Vasudeva, Arjuna, and Drona, all of them leading characters in our epic. Dion Chrysostom of the first century A. D. actually speaks of the existence of an Indian Homer; and Patanjali, who lived in the second century B. C., quotes a few verses which are still to be found in the Mahabharata. As all these ancient works and authors bear testimony to the reality of the principal personages that figured in the War, we may consequently conclude that it was an undoubted historical event.

Not only the Mahabharata but most of the Puranas refer to this great War between the

\* J. D. Mayne's Hindu Law and Usage p. 65.

† Ancient Sanskrit Literature p. 46.

‡ Indische Studien. III. p. 469—472.

\* Weber's Indian Literature, page 192.

Kauravas and the Pandavas. These Puranas are collections of bardic traditions preserved in a systematic manner. Though mainly prophetic in tone, (for it has to be remembered that their reputed author Vyasa Parasarya lived at the time of the war, but the events related therein reach down to a comparatively modern period), they are the repositories of traditional learning and old time legends. Much of what is contained therein has not any historical value; but enough is still to be found in the more authentic ones to attract the attention of the student of history. In the words of the late Mr. H. H. Wilson, 'a very large portion of the contents of many, some portion of the contents of all, is genuine and old; and it is therefore as idle as it is irrational to dispute the antiquity or authenticity of the greater portion of the contents of these Puranas.' They 'contain political and chronological particulars to which on the score of probability there is nothing to object. In fact their general accuracy has been incontrovertibly established.\* The Chandogya Upanishad refers to Itihasa Puranas as a branch of literature; and the Satapatha Brahmana mentions Itihasas and Puranas. May we not infer therefrom that some kind of annals of kings and dynasties existed even in that ancient period? 'Probably,' says Mr. R. C. Dutt, 'such annals were preserved in the traditions of the people and altered, recast and mixed up with legends from century to century, until after about two thousand years they finally assumed the shape in which we now find them,—the modern Puranas.†

The Puranas are supposed to treat of the following five subjects: (1) Primary creation or cosmogony; (2) Secondary creation or the destruction and renovation of worlds including chronology; (3) genealogy of gods and patriarchs; (4) Reigns of the Manus or periods called Manvantaras; and (5) History or such particulars as have been preserved of the ancient dynasties of India. Of the eighteen principal Puranas, the Vishnu, the Vayu, the Matsya, the Bhagavata and the Brahmanda give lists of 'the future kings in Kali'; and these rank, in importance and priority, in the order in which they are named.

The central idea of some of these Puranas and of the astronomical Siddhantas is that the Mahabharata war occurred a few years before 3102 B. C., the supposed beginning of the present Kaliyuga. Though it may be considered a heresy to doubt the truth of this supposition, the least critical

mind will find sufficient testimony in the very same Puranas to controvert this fondly cherished view. The Vishnu Purana states that 1015 years elapsed from the birth of Parikshit to the coronation of Mahapadma Nanda. The Vayu and the Matsya give 1050 years and the Bhagavata 1115 years, for the interval. They all agree, however, that the Nandas reigned in all for a period of one hundred years. The Vishnu being the least extravagant, a few scholars have been led to believe that 1015 + 100 or 1115 years elapsed between the Mahabharata war when the birth of Parikshit took place and the accession to the throne of Chandragupta, the immediate successor of the Nandas. The date of Chandragupta has been incontrovertibly fixed with the aid derived from Greek sources by the unanimous consent of all orientalists at 315 B. C., a date which the late lamented Professor Max Muller rightly called 'the sheet anchor of Indian chronology.\*' Consequently the war, which took place 1115 years before Chandragupta's accession, is placed at 1430 B. C. Besides, according to an old method of reckoning, the constellation of the Saptarshis (Ursa Major) was believed to move from one Nakshatra to another in a hundred years and the Puranas relate that the Saptarshis, which were in Magha Nakshatra at the birth of Parikshit, had moved on to Purvashada Nakshatra at the accession of Nanda to the throne. As there are ten lunar asterisms between Magha and Purvashada, the period denoted by the movement is one thousand years; and the Nandas reigned for a hundred years. Therefore the war is placed 1100 years before Chandragupta or at about 1415 B. C. Moreover, the vernal equinox was in the beginning of the Kritikas (Pleiades) during the time of the war. As it had receded by reason of the precession of the equinoxes to the Aswini Nakshatra in the year 499 A. D., the war is said to have taken place about 1426 B. C. It is also considered that the names Rohineya, Maghabhu, Ashadhabhava, and Purvaphalgunibhava accorded respectively to Mercury, Venus, Mars and Jupiter point to B. C. 1424, when the moon and the planets were in conjunction in the constellations denoted by the names. There is not much force in this last argument, because the positions given in the Vayu and Liuga Puranas for some of the planets are totally different. Professor Max Muller is of opinion that "these names of the planets have never been met with either in the Vedas or in any of the early productions."† Besides, there is

\* Wilson's Vishnu Purana, Introduction.

† Ancient India, Vol. II P. 29.

\* Max Muller's Ancient Sanskrit Literature. p. 298.

† Rig Veda. Vol IV. Preface, p. XXXIII.

nothing that connects these positions with the date of the war.

Such are the arguments which are advanced to fix the date of the war in the middle of the fifteenth century B. C.\* But Mr. R. C. Dutt and Mr. Fergusson place the war in the middle and in the beginning of the thirteenth century B. C.† respectively. The late Mr. H. H. Wilson thus sums up the opinions of his time on the subject: "According to Col. Wilford's computations (Asiatic Researches Vol. IX chronological table, p. 116) the conclusion of the great war took place B. C. 1370. Buchanan conjectures it to have occurred in the thirteenth century B. C. Vyasa was the putative father of Pandu and Dhritrashtra and consequently was contemporary with the heroes of the great war. Mr. Colebrooke infers from astronomical data that the arrangement of the Vedas, attributed to Vyasa, took place in the fourteenth century B. C. Mr. Bentley brings the date of Yudhishtira, the chief of the Pandavas, to 575 B. C.; but the weight of authority is in favour of the thirteenth or fourteenth century B. C. for the war of the Mahabharata and the reputed commencement of the Kali age."‡ Professor Macdonell traces "the historical germ of the great epic to a very early period which cannot well be later than the tenth century B. C."§ While these conflicting opinions are of great value as being indicative of the period when the war might have taken place, they unfortunately lack that precision and certainty which are so much to be desired. It will appear from the sequel that the reasons on which these opinions are based are far from conclusive and that the weight of probability rather indicates a somewhat different date.

To begin with, we have the evidence of the Vedanga Jyotisha, the earliest of the treatises on astronomy to be found in India. A Jyotisha Vedanga is referred to by Apastamba whom Dr. Buhler|| places on linguistic grounds in the third century B. C. and on other grounds about two centuries still earlier. The Mundakopanishad,¶ one of the few ancient Upanishads turned to account in so early a work as the Vedanta Sūtras of Badarayana, mentions the six Vedangas by name, of which the Jyotisha is one. We have no means of ascertaining whether the Jyotisha known to us as Vedanga is, or is not, the one referred to in those an-

cient works; but the archaic language in which our Vedanga is written and the unintelligible nature of some of the verses prove beyond doubt that it is a very ancient treatise, though perhaps not as old as the astronomical positions it indicates. The ancient Aryans in India had a knowledge of elementary astronomical phenomena as is evident from the numerous references to them in the Rik and the other Vedas. To better enable them to fix the seasons for their innumerable sacrifices, they devised a few elementary treatises on astronomy, one of which is still preserved to us in the Vedanga Jyotisha. Says Dr. M. Haug in his introduction to his Aitareya Brahmana.\* "A regulation of the calendar by such observations was an absolute necessity for the Brahmins; for the proper time of commencing and ending their sacrifices, principally the so-called *sattras* or sacrificial sessions could not be known without an accurate knowledge of the time of the sun's northern and southern progress. The knowledge of the calendar forms such an essential part of the ritual that many important conditions of the latter cannot be carried out without the former." Professor Max-Müller† admits that there must have been a real tradition which formed the basis of the astronomical positions recorded in the Vedanga Jyotisha. It states that the winter solstice occurred with the sun in the beginning of Dhanishta and that the summer solstice took place with the sun in the middle of Ashlesha.‡ Consequently the vernal and autumnal equinoxes occurred with the sun in the end of the third *pada* of Bharani and in the end of the first *pada* of Visakha respectively. We do not find in the Vedanga any division of the ecliptic into 360 degrees; this is but natural, because in those early times such scientific divisions could not have been known. The treatise is familiar with the division of the heavens into twenty-seven Nakshatras and probably also with the division of each Nakshatra into four Amsas or quarters. Indeed this old kind of the division of a Nakshatra into four Amsas is referred to in the following slokas of the Vishnu Purana II. 8:—

प्रथमे कृत्तिके भागे यदा भास्वान्तदा शशी ।  
विशाखानां चतुर्थोऽंशे मुने तिष्ठत्यसंशयं ॥  
विशाखानां यदा सूर्यश्चरत्यंशं तृतीयकं ।  
तदाचंद्रं विजानीयात्कृत्तिका शिरसि स्थितं ।  
तदैव विषुवाख्यो वै कालः पुण्योऽभिधीयते ॥

\* Mr. M. Rangacharya's Yugas, pp. 31-35.

† Dutt's Ancient India p. 10. Fergusson's History of Indian and Eastern Architecture p. 36.

‡ 'Vishnu Purana' Vol. IV. p. 232.

§ Sanskrit Literature. p. 285.

|| Sacred Books of the East, Vol II. Introduction,

¶ Mundaka Upanishad I. i. 5

\* Vol I. p. 46.

† Rig Veda Vol. IV Preface, p. XXVI.

‡ Vedanga Jyotisha (Yajur recension) v. 7.

"When the sun, O Sage, is in the first quarter of Krittika and the moon is in the fourth quarter of Visakha, or when the sun is in the third quarter of Visakha and the moon is in the head of Krittika, that is the time of the equinox and it is holy." Mr. Wilson seems to have misunderstood the meaning of भाग and अंश in the above verses, for he takes them to mean 'degree'. It will readily appear that 'quarter' is the more appropriate meaning, for it is only then that the sun and the moon are in "opposition" to each other.

The positions given by the Vedanga Jyotisha are also referred to by Garga\* and Varahamihira†; but they differ from those obtaining at present and even from the positions mentioned by Varahamihira as having been observed about the year 3600 ‡ of the modern astronomical Kali era or in 499 A. D. This great astronomer, who was born in 505 A. D., says in his Brihat Samhita:—"In the old treatises it is said that the summer and winter solstices took place with the sun in the middle of Aslesha and in the beginning of Dhanishta respectively; but at present they occur in the beginning of Cancer (beginning of the last quarter of Punarvasu) and Capricorn (beginning of the second quarter of Uttarashada respectively)." Therefore the winter solstice which happened with the sun in the beginning of Dhanishta at the time denoted by the Vedanga had receded in 499 A. D. to the end of the first quarter of Uttarashada, that is, by an arc of 23° 20'. As the rate of precession of the equinoxes is, according to the illustrious French savant M. Le Verrier, about 50. 24" per annum, the point of time denoted by our astronomical treatise is about 1672 years before 499 A. D., or about 1173 B. C. Archdeacon Pratt and Bentley, both of whom§ had gone over the calculation, were of opinion that the observations indicated 1181 B. C.

The next question is to ascertain what it was that took place about 1173 B. C. of such consequence as to induce the ancient astronomers to record the astronomical positions for the event. Mr. R. C. Dutt states that 'tradition has it that when the Vedas were compiled the position of the solstitial points was observed and recorded to mark the date.' Professor Weber considers that both the Yajur Veda Samhitas may be shown from internal evidence to have assumed their present shape about the time of the war of the Mahabharata, and the Puranas relate that Vyasa, the compiler of the Vedas, lived about the time of the war. It is therefore probable that the astronomical positions refer to the

period of the war which preceded the beginning of the Kaliyuga by a few years. The Jyotisha itself states that the first year of the 'Yuga' commenced at the winter solstice with the sun and the moon at the beginning of Dhanishta. In those early times there were two kinds of 'Yugas,' the five year cycle and the Kaliyuga.\* It is hard to believe that the positions referred to in the Vedanga denote only the beginning of such a short-lived Yuga as the five year cycle. It is reasonable to suppose that they also mark the time of the commencement of the Kali with which probably began the first of a new series of five year cycles.

But it may be asked what authority there is, besides the Vedanga, to suppose that the Kali era began when the vernal equinox occurred with the sun in Bharani 10°. On the contrary, there might seem to exist sufficient evidence to suppose that at the time of the great war, which occurred a few years before the Kaliyuga began, the vernal equinox took place with the sun in the Krittikas. For example, there are many passages in the Taittiriya Samhita, the Taittiriya Brahmana and other Vedic works where the Krittikas occupy the first place† in the list of the Nakshatras. The Krittikas are the mouth of Nakshatras, says the Taittiriya Brahmana (1. 1. 2. 1). In the Atharva Veda (1. 19. 7) and in the Yagnyavalkyasmṛiti, they occupy their early position, while the Vishnu Purana, as we have seen, actually places the vernal equinox in the beginning of the Krittikas. The Mahabharata says that the winter solstice took place sometime after the conclusion of the war on the fifth day after the new moon in the month of Magha,‡ and Hindu astronomers hold from such references that the vernal equinox was then in the Krittikas.§ If therefore at the time of the war the equinox was in the Krittikas, it might appear that at the beginning of the Kali era which very shortly followed the war the vernal equinox could not have receded to Bharani 10°, that is, a precession of 3° 20' which would take about 240 years to be accomplished. But this difficulty is easily explained.

It must be remembered that though the astronomical treatise gives only twenty-seven Nakshatras, the admittedly older works, the Atharva Samhita|| and the Taittiriya Brahmana¶ enumerate twenty-

\* Vedanga Jyotisha (Yajur Recension) verses 5-7 Aitareya Brahmana VII-15.

† See Max Muller's Rig Veda Vol. IV. Preface p. xxxiv. Mr. Tilak's Orion, p. 39. *et seq.*

‡ Anusasana Parva, ch. 167. 26 and 27.

§ Mr. Tilak's Orion p. 37. footnote.

|| XIX. 7. 1. 81.

¶ III. 1. 2. 5., III. 1. 5. 6.

\* See Mr. Tilak's Orion, p. 36.

† Brihat Samhita III. 1 & 2

‡ Warren's Kala Sankalita p. 389.

§ Max Muller's Rig Veda, Vol IV, Preface, p. XXVII.



eight Nakshatras. What is more important is the fact that the list of the Atharva Veda connects the twenty-eight Nakshatras with as many days and that the lists of the Taittiriya Brahmana show the connection of these twenty-eight asterisms with a lunar synodical month. We may therefore infer that at the time of the compilation of these two Vedic works, the number of lunar asterisms was twenty-eight. But curiously enough we meet with only twenty-seven Nakshatras in the Taittiriya Samhita, where Abhijit is left out. So also the mention of 'trinava', twenty-seven, in the Taittiriya Samhita (VII. 1. 3. 2) refers probably to the twenty-seven Nakshatras. While on the one hand the Taittiriya Samhita is the oldest of these three nearly contemporaneous compilations, the list of the Taittiriya Brahmana is on the other hand mentioned in connection with an old kind of sacrifice called Nakshatreshhti, a ceremony based on the supposition that there were twenty-eight Nakshatras. If we may judge by the generally received opinion that whatever is used for sacrificial purposes has the flavour of antiquity in it, possibly the original number was twenty-eight; and the mention of only twenty-seven Nakshatras in the Taittiriya Samhita\* may be due to the fact that it was compiled under the immediate direction of the learned son (Vyasa) of a great astronomer (Parasara), the reputed author of an ancient astronomical treatise, who might have been the first to omit Abhijit from the list of the Nakshatras in order to suit his astronomical calculations. Professor Whitney and M. Biot hold that the original number was twenty-eight while Professor Max Muller thinks that the number of Nakshatras was originally twenty-seven.† For our present purpose, it is enough to note that at the beginning of the Kaliyuga, when the compilation of the Taittiriya Samhita, at least in its original form, was completed and that of the Brahmana was almost begun, people were acquainted with both the lists. But from that time forward astronomers continued consistently to use twenty-seven Nakshatras only. From the earliest astronomical treatise known to us, namely, the Jyotisha Vedanga, to the latest work on Hindu astronomy, we find that all the Hindu astronomers, Garga, Aryabhatta, Varahamihira, Brahmagupta, Bhascaracharya and many others regulate their calculations by the twenty-seven Nakshatra system. It is this number that is referred to in the Mahabharata, Manu Smriti and the Vishnu Purana. We may therefore be sure that the number of twenty-eight Nakshatras which prevailed about the time of the

compilation of the Atharva Veda Samhita and the Taittiriya Brahmana was not adopted by later astronomers who preferred to use the more astronomically suitable number of twenty-seven Nakshatras.

The astronomers effected another improvement on the old method. The Nakshatras were made to begin with Dhanishta instead of with the Krittikas as of old. Somakara quotes an old saying of Garga in his commentary on the Vedanga Jyotisha (verse 5), तेषां च सर्वेषां नक्षत्राणां कर्मसु कृत्तिकाः प्रथममाचक्षते श्रविष्ठातु संख्यायाः १, which means that "of these Nakshatras, the Krittikas are the first for sacrificial purposes and the Sravishta (Dhanishta) are the first for purposes of calculation." It is clear therefore that in those early times referred to by Garga, the twenty-seven Nakshatras were counted from Dhanishta in works on astronomy. If the winter solstice was in the beginning of Dhanishta according to the Vedanga Jyotisha, the vernal equinox would be placed by astronomers in the end of the third quarter of Bharani. On the other hand, according to the twenty-eight Nakshatra system, if the winter solstice be at the same place, i.e., in the beginning of Dhanishta, the vernal equinox will occur with the sun in the beginning of the Krittikas. The same point in the heavens, which according to the twenty-seven Nakshatra system denoted the end of the third *pada* of Bharani, also indicated the beginning of the Krittikas according to the twenty-eight Nakshatra system. It is therefore wrong to suppose, as scholars\* have hitherto done, that the beginning of the Krittikas mentioned in the Vedic works denoted a point 3° 20' removed from the end of the third quarter of Bharani mentioned by the Vedanga as the position for the vernal equinox. Thus the positions given in the Vedanga are the same as those indicated in the Vedic works, noticed at the time of the war and recorded in the Vishnu Purana. The Vedanga Jyotisha itself confirms this inference as in enumerating the deities presiding over the various Nakshatras it begins the list with Agni, the deity of the Krittikas, and not with Yama, the presiding Devata of the Bharani Nakshatra.

There is still another difficulty to encounter. It may be asked with reason how at such early times such an imaginary point in the heavens as the end of the third quarter of Bharani, without any star to denote the position, could have been supposed to mark the vernal equinox. To answer this question this part of the heavens must be clearly laid before the mind's eye. Mrigasiras or the head

\* IV. 4. 10.

† Rig Veda Vol. IV Preface, p. xlv.

\* Mr. Tilak's Orion, p. 215.

stars of Orion are the earliest recorded beginners of the year, for with the sun near them the vernal equinox began the year in the very earliest period of Aryan history.\* According to the Surya Siddhanta† the distance between the asterisms Mrigasiras and Rohini (Aldebaran) is stated to be  $13^{\circ} 30'$ . The distances between Rohini and the Krittikas and between the latter and Bharani are stated to be  $12^{\circ}$  and  $17^{\circ} 30'$  respectively. As in those early times the heavens were divided into Nakshatras and Nakshatrapadas, and not into degrees and minutes, it must have been then crudely supposed that the distances between Mrigasiras and Rohini and between Rohini and the Krittikas represented nearly the arc covered by a divisional Nakshatra (i. e.  $13^{\circ} 20'$ ) and that the distance between the Krittikas and Bharani denoted a divisional Nakshatra and that the distance between the Krittikas and Bharani denoted a divisional Nakshatra and a quarter. The divisional Mrigasiras would therefore begin with the asterism Rohini (Aldebaran) and the divisional Rohini with the asterism Krittikas (Pleiades). The end of the divisional Krittikas would consequently coincide with the asterism Pleiades and its beginning would be placed about a *pada* after the asterism Bharani. Thus the position given by the Vedanga Jyotisha for the vernal equinox, namely, the end of the third *pada* of Bharani, was sufficiently identified as being distant from the stars Krittikas by one divisional Nakshatra and from the stars Bharani by one Nakshatrapada.

We may therefore conclude that at the beginning of the Kaliyuga, the vernal equinox took place with the sun at the end of the third *pada* of Bharani. As it is recorded that in 499 A. D. the vernal equinox occurred with the sun in the first point of Aswina, there was a precession of  $23^{\circ} 20'$  from the beginning of the Kali to 499 A. D.; that is, in other words, the Kali era began about 1173 B. C. It consequently follows that it is unreasonable to suppose, as some scholars have done, that the war happened about 1426 B. C. on the ground that the vernal equinox then took place with the sun in the Krittikas.

Secondly: The great Indian astronomer, Gargacharya, says in his Siddhanta when speaking of Salisuka, the fourth in succession from Asoka: "Then the viciously valiant Greeks, after reducing Saketa, Panchala country to Mathura, will reach Kusumadhawaja (Patna): Pushpapura being taken, all provinces will undoubtedly be in disorder. The unconquerable Yavanas will not remain in the middle country. There will be cruel

and dreadful war among themselves. Then after the destruction of the Greeks at the end of the Yuga, seven powerful kings will reign in Oudh." Mr. R. C. Dutt, from whose excellent work on Civilization in Ancient India the above translation is taken, remarks "we are then told that after the Greeks the rapacious Sakas were the most powerful and we have little difficulty in recognising in them the Yueti conquerors." The annals of Garga here come to an end. The very same foreign invasion is mentioned by Patanjali in his famous Mahabhashya on Panini. In commenting on the rule of Panini that the imperfect tense has to be used when the speaker refers to a past action, or (as Vararuchi adds in his Vartika) when the event related is out of sight but actually taking place at the same time, Patanjali illustrates the rule with the examples, "Arunadyavanah saketam," "Arunadyavano madhyamikan," "the Yavana besieged Saketa," "the Yavana besieged the Madhyamikas." The commentators on the Mahabhashya explain that Patanjali lived at the time, although not on the spot, when the Yavana besieged Oudh and the Madhyamikas. He refers also to "Mouryas," "Hall of Chandragupta," and "Hall of Pushyamitra." From these references Dr. Goldstucker\* infers that Patanjali lived about 144 B. C. But he was led to give that date because he thought that the Yavana invasion of Saketa and of the Madhyamikas referred to the Bactrian king Menander's invasion of Hindustan and encounter with the Buddhist Madhyamikas, the followers of Nagarjuna. Dr. Bhandarkar† infers that Patanjali wrote this particular portion about 144-142 B. C. on the ground that Menander is therein referred to and also for the reason that Patanjali speaks at the same place of sacrifices as still being performed for Pushyamitra.

It will be readily conceded that the word "Madhyamikas" denotes, as its etymology shows, the residents of the middle country, the same people that are referred to by Garga as the residents of the Madhyadesa or middle country. Patanjali himself explains the term to mean 'people or towns belonging to Madhyadesa‡ and the Manusmriti§ defines Madhyadesa to be the tract of country lying between the Himalayas in the north and the Vindhya in the south and between Allahabad in the east and Vinasana in the west. Consequently king Milinda's encounter with Nagarjuna and the Madhyamika sect recorded in Buddhist legends need not be identified with the Yavana invasion referred to by Patanjali and Garga.

\* Panini, p. 234.

† Indian Antiquary, I. 299; II. 59.

‡ Mahabhashya V.3.2.

§ Manusmriti II. 21.

\* Mr. Tilak's Orion, Chapters IV, V, VI and VII.

† Chapter VIII.

Moreover Dr. Rajendralala Mitra\* has shown that Menander never came as far as Oudh but only proceeded up to the Jumna, and in order that he might reach Oudh, he should have gone three hundred miles more to the eastward. That Garga does not refer to the invasion of Menander, which took place about 141 B. C., but to an earlier invasion of the Bactrian Greeks is proved by his referring it to the time of Salisuka who, according to the *Vayu Purana*, reigned for seven years after having ascended the throne 111 years from the date of Chandragupta or in the year 204 B. C.

In Madame Duff's recently published *Chronology*† of India, we find the following recorded:—

- (1) 206. B. C. Antiochos III of Syria, after making war on Euthydemus of Bactria, came to India and made a treaty with Sophagasenas (Subhasena).
- (2) 195. B. C. Demetrius of Bactria invades and reduces the Punjab.
- (3) 181 B. C. Eukratides ruled in India as well as over Bactria. Mithridates I, seized some of his provinces.
- (4) 180 B. C. The reigns of Euthydemus II., Antimachos I, and of Pantaleon and Agathocles. The coins of the last two are still found in the Kabul valley, western Punjab and Kandahar.
- (5) 165 B. C. The great Yueh-ti established themselves in Sogdiana by the expulsion of the Saka tribe, which thus dispossessed invaded Bactria.
- (6) 144 B. C. Lassen places Menander about this date.
- (7) 126 B. C. Bactria lost to the Saka tribe and wrested from it by the Yueh-ti.

It is clear from this list of dates which confirms the statements of Garga in a marked manner, that between 206 B. C. and 165 B. C., many Bactrian kings reigned over the north-western borders of India, and some of them extended their conquests into the heart of northern Hindustan. These Bactrian chiefs seem to have often quarrelled among themselves until at last the Saka tribe, driven from their original homes by the Yueh-ti conquerors, in their turn attacked and defeated the Bactrians about 165 B. C. and established themselves in Bactria. The Bactrians were the Yavanas of Patanjali and Garga, as they were Greeks who were often

styled as Yavanas by the Hindus. The statement of Garga that "there would be dreadful war among themselves and that in the end the Sakas would displace them" is justified by the many little wars among these Bactrians themselves who at last were sent away from Bactria by the Sakas. Mr. R. C. Dutt identifies these Sakas with the Yueh-ti conquerors; but this supposition is unnecessary, if not incorrect, because before the Yueh-ti conquerors came to Bactria, the Sakas were there in power. Garga, it has to be remembered, refers to the Sakas and not to the Yueh-ti. It would appear that when the Bactrians were confronted by the Sakas about 165 B. C. in Bactria, they retired from their Indian provinces in order to meet their new foes who threatened their very hearths and homes. As soon as the Yavanas retired, seven powerful kings are said to have reigned in Saketa or Kosala which, as we know from the *Vishnu Purana* and the *Bhagavatha*, was divided into seven parts or 'sapta kosalas.'

The Yavana invasion referred to by Patanjali and Garga occurred therefore a few years before 165. B. C., about which year, however, they retired from their Indian provinces. According to the *Puranas*, Pushyamitra subverted the Mauryan dynasty and began to reign in northern India 137 years after the accession of Chandragupta to the throne, i.e., in 178 B.C. He is the father of the hero of Kalidasa's *Malavikagnimitra*, who according to the drama "defeated the Yavanas on the southern banks of the Indus." Probably this defeat also contributed to the retirement of the Greeks from the *Madhyadesa*. Kalidasa represents Pushyamitra as having been engaged in a great sacrifice when the victory over the Yavanas was gained and Patanjali states that sacrifices were being celebrated by Pushyamitra in his time. Moreover Patanjali refers to the Gargas so often as to induce Professor Weber to state that "the Gargas must have played a very important part at the time of the *Mahabhashya*, in the eyes of the author at all events."\* It may also be noted that Garga's annals which refer the beginning of the Yavana invasion to the time of Salisuka (204—197 B.C.), close rather abruptly with the narration of the destruction of these Yavanas. This fact shows that he could not have lived much later. For all the reasons above set forth, we may conclude that Pushyamitra, Patanjali and Garga were almost contemporaries and lived about 165 B. C., the date of the retirement of the Bactrian Greeks from India. We may also suppose that Patan-

\* Indo - Aryans Vol II, p. 193.

† pp. 13 - 15.

\* Indian Literature, p. 252.

jali and Garga lived sometime before the invasion of Menander in 144 B.C., inasmuch as neither of them refers to the great Bactrian conquerer who overran Northern India and was of such consequence and renown as not only to find an honoured place in Buddhistic legends but also, according to Plutarch, to give rise, when he was no more, to a contention among several towns for the custody of his imperial ashes. That Garga lived about 165 B.C., is confirmed by a *Sloka* of his \* quoted by Bhattotpala in his commentary on Brihat Samhita, which means that if the sun were to turn to the north without reaching Dhanishta, it foretold great calamity. Garga is most probably referring in this prophetic strain to the conquest of the Yavanas which was such a calamitous occurrence. As the sun commenced to turn to the north without reaching Dhanishta about the year 216 B. C. when the winter solstice began to occur with the sun in Sravana, he must have lived only a little later when the change began to be felt. For if he had lived long after this astronomical variation, he would not have noted it and regarded with any anxiety.

This retirement of the Yavanas is said by Garga to have occurred "at the end of the Yuga." What is the Yuga that he speaks of? I am sure that it refers not to the short-lived five year cycle but to the other Yuga then in existence, the Kali Yuga. Garga himself speaks of the four Yugas, Krita, Treta, Dwapara and Kali, the third ending, and the fourth beginning, with the Mahabharata war. It will be shown when the subject of the Yugas comes to be dealt with that the Kali period was originally believed to consist of a thousand years. As the retirement of the Yavanas from India took place about 165 B. C., the Kali Yuga which ended about this time must have begun about 1165 B. C.

Thirdly: Megasthenes, the ambassador of Seleucus at the court of Chandragupta, has recorded in his writings the impressions he received while in India. His writings are known to us only in fragments from the works of Arrian, Pliny, Solinus, and others. Arrian (146 A. D.) quotes the following from Megasthenes: "From the time of Dionysus to Sandracottus, the Indians counted 153 kings and a period of 6042 years; but among these a republic was thrice established \* and another to 300 years and another to 120 years." † Pliny (41 A. D.) in quoting Megasthenes on the ancient history of the Indians says: "For the Indians stand almost alone among the nations in never having migrated from their own country. From the days of Father

Bacchus to Alexander the Great, their kings are reckoned at 154, whose reigns extend over 6451 years and 3 months." \* Solinus (238 A. D.) is reported as stating:—

"Father Bacchus was the first who invaded India and was the first of all who triumphed over the vanquished Indians. From him to Alexander the Great, 6451 years are reckoned with 3 months additional, the calculation being made by counting the kings who reign in the intermediate periods to the number of 153." † Thus there are three independent sources from which we can obtain an insight into the ancient chronology of India as known to the Greeks. It has to be noted that the legend of Dionysus or Bacchus and his connection with India is one of the most famous in Hellenic antiquity. Persecuted by the jealous Hera, Dionysus was exposed on mount Nysa in Thrace from which he took his name (Dionysus = Nysa Sprung). In his long travels he is said to have reached India once upon a time where he spent a few years in subduing its fierce tribes and teaching them, for so the story goes, the elements of cultivation, the pleasures of the grape, and the arts of civilization. In his *Anabasis*, the historian, Arrian introduces the name of Dionysus in connection with another Nysa, a city near the modern Cabul, which about 327 B.C. surrendered to Alexander the Great. The troops of the Macedonian conqueror recognising in that city the limits of the conquest of Dionysus praised their leader as having surpassed even Dionysus in the extent of his conquests. Having found in Nysa near Cabul a verbal resemblance to the town of Nysa in Thrace, they naturally supposed that Dionysus must have gone so far east as India, and in this supposition they were confirmed by their tradition. Thus we can understand how the Greeks, always bent on identifying their legendary heroes with those of other countries came to identify Bacchus (Dionysus) with Ikshvaku, the son of Vaivaswata Manu, who, according to Indian tradition, was the first to establish government and the arts of peace in Aryavarta. The Puranas give almost the same number of reigns from the time of Vaivaswata to the time of Chandragupta or Alexander. The number of kings given by these foreign historians "is eminently satisfactory as it seems clear that we possess in the Puranas the same lists as were submitted to the Greeks in the fourth century B. C. In the solar lists we have in the Treta Yuga 62 reigns from Ikshvaku to Rama. For the Dwapara age we have three solar lists: one from Kusha to Brihadbala, 35 reigns; another

\* Mr. Tilak's Orion. p. 19.

† Mc Crindle's Ancient India pp. 203 and 204.

\* Hist. Nat. VI. XXI. 4, 5. Macrindle's Ancient India p. 115

† Mc Crindle's Ancient India, p. 115.

from Disha to Janamejaya, 33 reigns; a third from the son of Siradhwaja, the father of Sita, to Mahabasi, 34 reigns. In the Kali Yuga we have no complete solar list, but the lunar list gives fifty descents from Jarasandha to the last Nanda. This gives 145 or 146 reigns.\* But with regard to the periods given in the three classical accounts, they have hitherto yielded "nothing of historical value. Fergusson was of opinion that this part of the statement must be rejected as it gave an average duration of nearly forty years for each reign. "But," says he, "it is satisfactory to find that at that early age, the falsification of the chronology had only gone to the extent of duplication and that the monstrous system of Yugas, with their attendant absurdities had not then been invented." But this is an unsatisfactory method of explaining the figures mentioned by the generally accurate classical historians. When the number of the kings given by them tallies with that given by the Puranas, it may be asked how the number of years alone comes to be exaggerated. I believe that far from being totally inaccurate, the years serve but to confirm the date fixed for the beginning of the Kali Yuga.

It has to be noted that the number of years given by so accurate a historian as Arrian differs from that given by Pliny who lived about a century earlier, and by Solinus who wrote about a century later, than Arrian. It has also to be remembered that every one of these scholars seems to quote from a common source, the writings of Megasthenes. But for the unfortunate destruction of the great Alexandrian library and the misguided vanity of the monks of early Christianity who erased many valuable writings on the ancient papyrus rolls so as to give room for their own productions, we might have been overwhelmed with a wealth of ancient lore and tradition to illuminate many a dark problem relating to antiquity. Thus has been lost to the world the 'Indika' of Megasthenes and we are therefore to be content with the fragments quoted above from the other authors. Arrian states that 6042 years elapsed from the time of Ikshvaku to that of Chandragupta and that "among these" there were republics established for a period of about 420 years. We may suppose that the total for the reigns of the kings and for the republics comes to about 6042 + 420 or 6462 years,† a

figure which very nearly approaches that given by the other two historians, 6451 years and 3 months. But inasmuch as we have for the latter figure the authority of two authors one of whom was earlier by a century than Arrian and inasmuch as both these writers are so exact as to give the number of months also in addition to the years elapsed, whereas Arrian deals vaguely in round figures in speaking of the republics, we ought to be satisfied that Megasthenes, the authority for all the three historians, must have stated that from the time of Ikshvaku to that of Alexander there had elapsed a period of 6451 years and 3 months. It is a matter of common knowledge that Alexander fought with Porus in the year 326 B. C., and left India for good in the year 325 B. C. \*

To explain the number of years given by these historians, we shall have to advert to the Saptarshi cycle. We cannot at this distance of time explain satisfactorily what exactly our ancients had in mind when they laid down the mysterious proposition that the seven Rishis or the seven stars of Ursa Major moved on from Nakshatra to Nakshatra at the rate of one Nakshatra for every one hundred years. Bentley † supposed it to be a crude way of expressing what to the ancients was the inexplicable precession of the equinoxes. This imaginary motion is thus explained in the Vishnu Purana:—"When the two first stars (Pulaha and Kratu) of the seven Rishis (the great bear) rise in the heavens and some lunar asterism is seen at night at an equal distance between them, then the seven Rishis continue stationary in that conjunction for a hundred years of men. At the birth of Parikshit they were in Magha and the Kaliyuga, which consists of 1200 years, then commenced."‡ The commentator on the Bhagavata Purana says: "The two stars Pulaha and Kratu must rise or be visible before the rest; and whichever asterism is in a line south from the middle of these stars is that with which the seven stars are united and so they continue for one hundred years." Very much the same explanation is given by the Vayu and the Matsya Puranas. § Despite the authority of the venerable compilers of these Puranas, I am led to think that this explanation appears to be fantastic and opposed to astronomical science. It is true that the shifting of the equinoxes consequent on their precession may change the aspect of the starry sky with reference to the celestial poles. But as a matter of fact,

\* Fergusson's History of Indian and Eastern Architecture p. 712.

† As Pliny and Solinus give 6451 years for the interval between Ikshvaku and Alexander, and as Arrian gives 6462 years for the interval between Ikshvaku and Sandracottus, the two statements may perhaps be reconciled by our supposing that Chandragupta (315 B. C.) began to reign about 11 years later than Alexander's conquest of India (326 B. C.)

\* M. Duff's Chronology of India, pp. 8 and 9.

† Historical View of Hindu Astronomy, p. 65.

‡ Vishnu Purana, IV. 24.

§ Wilson's Transn. Vol IV. 233.

|| Wilson's Vishnu Purana, Vol IV, p. 233.

the constellation of Ursa Major which is stationed between the Leonis and the north pole of the heavens cannot move on from Nakshatra to Nakshatra in the manner supposed by the Pauranikas. Indeed we are informed by the Puranas and the astronomers, Garga and Varahamihira, \* that the Ursa Major was in [i.e., was between the north pole and] the Magha Nakshatra (the Sickle) in the days of Yudhishtira; and as we find it even now to be located nearly in the same position, we may infer that the movement, far from being actual, was merely a convenient method to denote the march of time from the famous epoch of the Pandava Yudhishtira. Thus if a certain event is stated to have occurred with the Saptarshis, say, in the Visakha Nakshatra, the statement does not signify that the Rishis have actually moved on to Visakha, but only means that the event took place in the sixth century after the epoch of Yudhishtira, Visakha being the sixth Nakshatra from Magha.

We have already seen that the number of Nakshatras popularly in use about the time of the compilation of the Atharva Veda Samhita and Taittiriya Brahmana was twenty-eight, including Abhijit, which Nakshatra was however left out by the Vedanga Jyotisha for enabling it to deal with astronomical phenomena in a scientific manner. But the change from twenty-eight to twenty-seven Nakshatras was confined for a long time to astronomers only. As the moon takes about  $27\frac{1}{4}$  † days to make one complete circuit of the earth, the astronomers seem to have preferred the number of 27 Nakshatras, or "milestones of the heavens," as they have been appropriately termed, in order to make the moon's progress through each Nakshatra to correspond to a civil day as nearly as possible. But for ordinary purposes the number of 28 Nakshatras seems to have been retained, as for instance, in the performance of Nakshatreshthi sacrifices. As about the time of Yudhishtira the two Vedic works which refer to the twenty-eight Nakshatras were compiled, the cycle of the Saptarshis which began with the epoch of Yudhishtira appears to have been originally a cycle of twenty-eight centuries. It is true that in Kashmir, where the Saptarshi cycle is even now prevalent, it is considered to be a cycle of twenty-seven centuries. This belief, however, is due to the fact that the twenty-seven Nakshatra system has become firmly established in India since the time of Aryabhata and Varahamihira. But at the time we are speaking of, namely, the reign of Chandragupta, the old popular way of counting twenty-eight Nakshatras was

much in vogue and the Saptarshikala was therefore a cycle of 2800 years.

It is apparent from the Puranas that the different dynasties date from the beginning of the Treta Yuga and that Ikshwaku and Budha flourished at the beginning of the same Yuga. \* The Puranas relate nothing of historical interest as having taken place in the first or Krita age which is mainly occupied with the first four non-historic † Avatars of Vishnu. The Bhagavata ‡ says that in the beginning of the Treta Yuga, Pururavas, the first king of the lunar line and the nephew of the first king of the solar line, introduced the three fires. In the Uttarakanda of Valmiki Ramayana it is related that the Kshatriyas were born in the Treta Yuga. § It is therefore clear that both the solar and the lunar dynasties were supposed to have come into being in the beginning of the Treta Yuga, that is, two Yugas before the commencement of the Kali Yuga. In a subsequent chapter it will be shown, chiefly from references in the Rig Veda, that in Vedic times there existed a cycle of a thousand years, probably called 'Saptarshi Chakra', connected with the constellation of the Saptarshis, that there had intervened two such cycles between the time of Ikshwaku and that of Yudhishtira, that these two cycles were afterwards converted into the Treta and Dwapara Yugas of later chronology and lastly that this Saptarshichakra was the direct parent of our Saptarshi cycle of twenty eight centuries. The informants of Megasthenes, who were aware that two Saptarshichakras or cycles had preceded the war, naturally, though erroneously, supposed that two periods of 2,800 years each, or 5,600 years in all, had expired by that epoch. That the Saptarshi cycle was the guiding system of chronology about the time of Chandragupta is proved by a verse || of Garga which uses the Saptarshi periods to fix the date of the Saka (sic) kala. As Megasthenes gives 6451 years for the period between Ikshwaku and Alexander the Great and as 5,600 years were supposed to have expired at the beginning of the Kali Yuga, 6451 - 5600 or a duration of 851 years must have been the period represented to Megasthenes as having expired since the commencement of the new era. Since Alexander left India in 325 B. C. the Kaliyuga must have commenced,

\* Warren's Kala Sankalita, pp. 358 and 366. Fergusson's History of Indian and Eastern Architecture, p. 712. Bhagavata IX. 14.

† W. J. Wilkin's Hindu Mythology, p. 130.

‡ IX. 14. 49.

§ Oh 74.

|| Brihat Samhita XIII. 2 and 3.

See also Vishnu Purana IV. 24., where the age of Nanda is fixed in a similar manner.

\* Brihat Samhita XIII 2 and 3.

† 27 days, 7 hours, 46 minutes, and 12 seconds.

according to the informants of Megasthenes, in the year 851 + 325 or 1176 B. C.

There are five important eras at present in use among Hindus in India of which the Vikrama and the Salivahana are the latest. The Saptarshi era is even now prevalent in Kashmir and the Kali is used generally in the rest of India. But the Malabar country is also guided by another era, called after Parasurama, which is also known as the Quilon or Kollam era. According to approved tradition it is a cycle of a thousand years and the present cycle, believed to be the fourth, began in the year 1825 A. D. But curiously enough, Mr. Logan thinks it to be an era beginning in 825 A. D., because no doubt that supposition suited his theory regarding the date of Cheruman Perumal, the supposed royal convert to Islam. Many scholars, like Drs. Caldwell, Gundert and Burnell, have tried to explain the true origin of the Kollam Andu, but their explanations do not seem to be satisfactory. The late Mr. P. Sundaram Pillai discussed these opinions in a paper contributed to the *Madras Christian College Magazine* (Feb. 1897) and finding them unsatisfactory, suggested that the Kollam Andu was "a modification of another older era current in Upper India under the name of Saptarshaya or Sastra Samvatsara. The peculiarity of this northern era is that though it is to-day 4972, it is spoken of as 72, so that omitting the hundreds it would be found to be identical with our Malabar year except for four months beginning with Mesha." The Saptarshi begins with the month of Mesha; but the Kollam begins with Kanya in the north, and with Simha in the south, of Malabar. Mr. Sundram Pillai explains this divergence by supposing that in all probability the astronomers "found it necessary so to amend the northern luni-solar year in order to convert it into a purely solar one as the Kollam year professes to be." Mr. Sundram Pillai however ignores the fact of the Kollam Andu being a cycle and believes that it was adopted about 825 A.D. from the countries using the Saptarshi era. This is certainly a misconception and is due to the fact that the Kollam Andu at present counts also the thousand years of the last cycle in addition to the expired years of the present cycle. Thus the Kollam Andu for July 1901 is the 76th year of the fourth cycle; but it is now written as 1076 of the Kollam era. On the contrary, Lieutenant. Col. Warren, who wrote his work, the learned Kalasankalita, just about the beginning of the present cycle in 1824 A. D., says of this Andu, "that there had expired on the 14th September, 1800, two cycles of a thousand years each and 976\* years of the third cycle". Mr. R.

Sewell states in his Indian Calendar \* that the years of the Kollam Andu "run in cycles of thousand years. The present cycle is said to be the fourth. If there were really three cycles ending with the year 1000, which expired 824-5 A. D. then it would follow that the Kollam era began in Kali 1927 current or the year 3528 of the Julian period." Warren relied on a still earlier authority, Dr. Buchanan, who stated "that the inhabitants of Malayala reckoned time in cycles of thousand years from 1176 B.C. and that in September 1800 A.D., there were two cycles and 976 years expired of that era." † We have therefore the authority of three eminent writers, two of whom lived before the commencement of the present cycle, to the effect that the Kollam era is really a thousand year cycle beginning in August or September 1176 B. C.

Not only is the Kollam Andu a cycle of a thousand years but it is also identical with the old Saptarshi cycle which is referred to by Albiruni (1030 A.D.), Kalhana (1148 A. D.) and the Puranas. As many manuscripts in the Deccan College are said to be dated in the Saptarshi era, this era seems to have once been much more widely used than at present. Though the Kashmirians now state that this era began in 3076 ‡ B.C., it will be shown in a later chapter that about the time when the chronological portion of the Vishnu Purana was reduced to its present form, the Saptarshi era was supposed to begin a hundred years earlier, or in 3176 B. C., that the Vedic 'Saptarshichakra' cycle of a thousand years, the first cycle of which began in 3176 B. C. and the second cycle of which ended in 1176 B. C., was the direct parent of, and was immediately followed by the modern Saptarshi kala. The Kollam Andu too is a cycle of a thousand years and began in 1176 B. C. Is it not then most likely that both the Saptarshi and Kollam cycles are almost identical? The earliest starting point for the modern Saptarshi kala is the "birth of Parikshit when the Rishis were in Magha, and the Kali Yuga then commenced." § Thus the Puranas identify the Saptarshi Kala with the Kali Yuga. As the Kollam era has been identified with the Saptarshi era, we may safely conclude that the Kollam Andu, the Saptarshi Kala, and the Kali Yuga, all commenced in 1176 B.C.

The Kollam era seems to have been brought into Malabar by the Aryan Namburi immigrants at some remote period in the annals of southern India. "Everything about the Namburi society is hoary

\* P 45.

† Must be 975 years. Kalasankalita p. 298.

‡ R. Sewell's Indian Calendar p. 41

§ Vishnu Purana IV. 24.

\* Must be 975 years. Kalasankalita, p. 374.



with age," says Mr. V. Nagam Aiyar in his report on the Census of Travancore. What has been altogether forgotten by the Hindus in the rest of India, Kashmir alone excepted, is still retained by these extremely conservative people of Malabar. But the very same reason which accounts for the disappearance of this era in the rest of India also contributed to the origin of the era being forgotten in Malabar. In the beginning of the sixth century A.D., the astronomers made the Kali Yuga begin in 3102 B.C., and the authority of Aryabhata and Varahamihira was supreme enough to cause the spread of the new doctrine throughout the length and breadth of India. The people of Malabar, who were led therefore to believe that the Kali began in 3102 B.C., connected their era, which really began with the commencement of the Kali era in 1176 B.C., with the venerable name of Parasurama, the supposed leader of the Aryan immigration into Malabar.

It is strange that, to this day, it is a Namburi Brahman that is the ministering priest at the shrine of Kedarnath in the Himalayas and at Jagannath in Orissa. It is also curious that not only in chronology, but also in architecture, laws and usages, the northernmost parts of India have much in common with the Malabar country. Dr. Ferguson and Mr. J. D. Mayne are both struck by this remarkable coincidence. Whatever be the explanation for this resemblance, we may be perfectly sure that the extremely conservative tendency of Malabar has very largely helped to preserve it. Of all the peoples in India, the Malayalis, Brahmans and non-Brahmans alike, still preserve their respective old institutions with a pious heroic conservatism worthy of a better cause. If Western education has undermined this pathetic attachment to the old order of things, we can only hope that those to whom has been entrusted the shaping of their new destiny will consider the claims of the old in paving the way for the new.

VELANDAI GOPALA AIYER.

#### THE MIND OF THE CENTURY. *Fisher Unwin.*

This is a reprint of a series of papers which appeared in the *Daily Chronicle* from time to time. The articles, sixteen in number, cover a wide range of subjects and though short yet each paper serves to indicate on broad and general lines the progress of the century in the various branches of knowledge. Poetry, Drama, Fiction, Essays, Music, Art, History, Travel, Theology, Philosophy, Economics, Education, Chemistry, Medicine, Natural Science, Applied Science—these are the sixteen subjects that are dealt with by well-known writers.

#### The World of Books.

##### THE MEDITERRANEAN RACE by *G. Sergi.* (*Walter Scott, London 1901. Price 6s.*)

This is a translation of the book which when first issued in Italian in 1895 was at once recognised as marking an epoch in the study of European Ethnology. Like Canon Taylor's *Origin of the Aryans*, it struck right across the accepted theories, but the Italian Professor's work was both more original and more revolutionary. It causes, however, curious reflections to see both Taylor's and Sergi's books in the *Contemporary Science Series*. Both claim to be rigidly scientific and to give only conclusions that are beyond doubt; yet those conclusions are completely inconsistent. Both may be wrong; both cannot possibly be right.

The importance of Sergi's book is that it has led many Ethnologists to accept the theory that the Libyans, Egyptians, Guanches, Hittites, Phœnicians, Iberians, Ligurians, Pelasgians, Italians and Etruscans all belonged to one race which he calls the Mediterranean. A corollary is that the Greek and Roman civilisations were not Aryan, but Mediterranean. These opinions are based upon a classification of skulls according to general shape, ellipsoid pentagonoid &c. We believe they are now regarded as ethnological orthodoxy. Professor Sergi, however, goes further and advocates certain theories which are more doubtful. He abandons the monogamist view and regards mankind as composed of different species. One of these species which he calls Eurafrian had its cradle in Africa, and through migrations is now divided into three races, African, Mediterranean, Nordic. Another species is Eurasiatic, a variety of which is the Aryans. The Aryans when savages invaded Europe finding there a superior civilisation, and imposed on the Eurafrian races whom they found three dialects of the Aryan tongue. Thus not only Greeks and Romans but also Germans, Slavs, Celts, are not Aryan but Eurafrians of different varieties.

It is quite too soon to predict the future of these views. Professor Sergi claims that he keeps more closely to actual observation than other ethnologists, but we cannot help feeling that his data are too few and vague to give any certainty to his conclusions.

##### GREAT BOOKS AS LIFE-TEACHERS, by *N. D. Hillis. (Oliphant, Anderson and Ferrier).*

Mr. Hillis is a discriminating reader of books, and the work before us, though only a book about books, is well worth reading for its own sake. His choice, from a literature so full and various as



to make choice a task of despair, is excellent, and though it be imperfect and command the assent of but a few, it must be remembered that every choice must have the same drawbacks. "*The Scarlet Letter*," "*Les Miserables*," Browning's "*Saul*," "*The Idylls of the king*," "*Romola*," "*The Seven Lamps of Architecture*," "*The Ascent of Man*"—surely these have places among the books that are inspired by a lofty moral purpose, and calculated to elevate, purify, and strengthen the nature of man. The ethical teaching in these works is admirably brought out, stepping forth, as it were, with a most easy and natural step, to greet the reader. No subtle, tortuous analysis of the heart's workings, no sombre, tedious sermonising, none of the pitiless, scornful pointing with the finger that is so repellent in books designedly moral. Mr. Hillis merely recalls each story in its outline, touching, however, the landmarks so suggestively that you feel your own mind working out the lesson, not receiving it from without. The lesson of Saul's life and death is perhaps the most impressively and copiously worked out. The outline of "*Les Miserables*" shows the author's wonderful selective power. "*The Idylls of the king*" are worked out with great sympathy and insight, and their unity stands forth invested with a new significance.

Mr. Hillis's studies of Gladstone and Livingstone, and his essay on "The Prophets of the New Era" show a genuine enthusiasm for the unselfish and the heroic man and a healthy optimism which looks out with joy and hope upon the future of humanity. Mr. Hillis affects the ornate style, and loads his paragraphs with parallels, allusions, and similes. Now and then he throws forth an analogy of a deep and startling meaning in the manner of Emerson, but his well-knit sentences and carefully polished antitheses remind one oftener of Macaulay than of any other single author.

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**STONES ROLLED AWAY AND OTHER ADDRESSES TO YOUNG MEN DELIVERED IN AMERICA, by Professor Henry Drummond. (Samuel Bagster and Sons, Limited, America and London.)**

The addresses brought together in this neat little volume bear ample testimony to the characteristic qualities of Prof. Drummond's head and heart. They reveal deep insight into and hearty sympathy with the needs of men struggling with the trials and temptations of life and are full of elevating thoughts and practical wisdom. Though they view the problem of life from a purely Christian point of view, there is much in them which will evoke a

sympathetic response in the hearts of true and devout men of all religions. "Walk in the spirit, and ye shall not fulfil the lusts of the flesh," "It is God which worketh in you. God is with us and in us." "He that loveth his life shall lose it; and he that hateth his life in this world" shall keep it unto life eternal. It is universal truths such as these that are pressed home with charming simplicity and directness in these addresses. We have no doubt they will reach a wider audience than they were originally intended for and help many a struggling soul into a higher life.

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**UNDER THE REDWOODS. (Geo. Bell and Sons.)**

Bret Harte has lost none of his old charm; and though he has many competitors, notably Rudyard Kipling as a short-story-writer Bret Harte is still welcome to his numerous admirers. Under the title above noted the author furnishes us with ten short tales and sketches, all told in his sprightly vein and abounding with good things. As a phrase maker, Bret Harte is only equalled by Kipling, but as a humourist we should give Bret Harte a superior position. Of the ten stories, "Jimmy's Big Brother from California" takes the premier rank in our estimation for its simple pathos and entire naturalness. As one reads the story one learns to love those rough miners and backwoodsmen that Bret Harte draws for us in his inimitable way, and underneath the red shirt and foul language, their large hearts and kindly spirit stand revealed. "The widow of Sant Ana Valley" is a distinctly taking story. Bret Harte's description of the big dance in this short tale is as good as anything we have read anywhere. The intoxication of the moment took possession of Sunday school teachers, Deacons and others who did not want to dance. As witnesses:—

"Before Mrs. Wade could protest, Brooks's arm had gathered up her slim figure, and with one quick backward sweep and swirl they were off; The floor was cleared for them in a sudden bewilderment of alarm—a suspense of burning curiosity. The widow's little feet tripped quickly, her long black skirt swung out; as she turned the corner there was not only a sudden revelation of her pretty ankles, but, what was more startling a dazzling flash of frilled and lace petticoat, which at once convinced every woman in the room that the act had been premeditated for days!.....And stranger than all a corybantic enthusiasm siezed upon the emotionally religious, and those priests and priestesses of Cybele who were famous for their frenzy and passion in camp-meeting devotions seemed to

find an equal expression that night in the waltz. . . . . Deacons and Sunday School teachers waltzed together until the long room shook, and the very bunting on the walls waved and fluttered with the gyrations of those religious der-vishes. Nobody knew—nobody cared how long this frenzy lasted—it ceased only with the col-lapse of the musicians. Then, with much vague bewilderment, inward trepidation, awkward and incoherent partings, everybody went dazedly home: there was no other dancing after that—the waltz was the one event of the festival and of the history of Santa Ana. "Under the Redwoods" amply repays perusal."

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CINDERELLA by S. R. Crockett. (Macmillan's Colonial Library.)

This is a simple story of life. An orphan girl brought up by a faithful nurse and a kind-hearted parish minister in the simple tastes and virtues of country life is, when about to attain the age of majority, suddenly transplanted into the household of her paternal aunt and her husband who are the girl's legal guardians, and who live in London in the height of fashion and the glamour of prosperity. They had become rich chiefly through the wealth of their ward, whom, however, they not only neglected during the years of her childhood, but now in her budding youth consign to the position of governess of the younger children. Suffering this ignominy in meekness, Hester Stirling learns the art of dancing to perfection from a French dancing master, and at a ball given by a Duchess who acts as her fairy god-mother, makes an astonishing success. This rouses the jealousy of her guardians and their eldest daughter, who found herself not only outshone by one whom she had despised as a charity-girl, but openly abandoned by a young nobleman who had been her favourite suitor, but who was now smitten with love for the simple, suffering maiden. A ruby of hers but similar to five others in her guardian's possession gives him the means of de-nouncing her as a thief and throwing her into pri-son, from which she is rescued by her lover. Her innocence being established in a court of law, she retires into the country, and flings herself once more into the arms of her loving nurse to whom she confides the secret of her love for her deliverer. The young man, unable to rest without her, seeks her out, and they are engaged to each other. Before the day of marriage, Hester's father returns from a long absence in Burma where he had profited by his share in a ruby mine, is able to prove the five rubies in his brother-in-law's possession as well as

Hester's to be his own, and restores "Cinderella" to her right. Her young lover is also reconciled to his father after a long estrangement, and the wedding thus takes place amidst the rejoicings of the parents, the noble-hearted nurse, Hester's early instructor and friend, the parish minister, the fairy godmother, and other friends.

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CINDERS by Helen Mathers. (George Bell and Sons.)

A love story of power and interest. A dull, selfish, but handsome widow, and a younger relative of hers, Cinderella (or Cinders, as she is called) are rivals for the love of a cultured young man. Not handsome or coquettish, Cinders has a refreshing directness of speech, an alertness of mind, and a passionate enthusiasm for England's heroism in the South African War, which mark her out distinctly from womankind. Andrew is pledged to the widow, but cannot resist the im-pulse to serve his country in time of need, and goes out. In this he is heartily encouraged by Cinders whose generous excitement, enhanced by the fire of her eyes, makes a deep impression on the high-souled volunteer. He returns with a broken arm only to find the widow cold and anxious to break off the engagement. To Cin-ders, however, the loss of a limb for the noble cause has transformed Andrew into a hero upon whom she lavishes the tenderness and sweet attentions of a noble soul first touched by love and now carried away by a whole-hearted devotion. Andrew's mind responds to the changed circum-stances, and when the widow relieves the situation by marrying a country gentleman, finds the plea-sures of true love and the reward of a manly life in union with the woman who had cheered him when he went to his duty and welcomed him rejoicingly on his glorious, if crippled, return.

The bye-plot, in which a couple, who have given a son to the war, but live in mutual estrangement, are afterwards reunited in love under somewhat dramatic circumstances, is a clever piece of work adding to the interest and excitement of the plot, but appears a little unnatural and laboured.

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THE HELMET OF NAVARRE. (Macmillan & Co.)

This is a stirring tale of adventure in the troublous times of French history when the house of May-enne took sides against Henry of Navarre. The political ascendancy sought by the opposing parties, Mayenne and Navarre, and the plot and the counter-plot involved, are the frameworks in which is pic-tured as pretty a little love story as only happened in those times of romance and chivalry. The

affection and zeal that feudal retainers feel for their masters and the easy goodfellowship in which circumstances sometimes placed them, are admirably portrayed in the persons of Felix Bronxe and his young master the Comte de Mar. The lady author (Bertha Runkle) has caught the spirit of the times in which she lays her story very accurately and the quaint phraseology, the recklessness of life, the code of honor obtaining then, and other trifling particulars of sorts, are grouped before the reader in a very vivid and truthful manner. Mlle. De Montbec, the heroine of this old-world romance, is a charming figure and is drawn with great skill. Some of the scenes are dramatic in the extreme and admirably adapted for the stage. The illustrations, twelve in number, are by A. Castaigne and serve to give point to the letterpress. We have not been able to ascertain why this story bears the title it does, though it is a fetching one.

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#### THE BARON'S SONS (*Geo. Bell & Sons.*)

Is the title of a story by that well-known author Maures Jokai and is a sketch of some scenes in the Hungarian Revolution of 1848. The work is a translation by Mr. P. F. Bicknell, but it nevertheless gives a very graphic description of the scenes of war and social life characteristic of the period. The author's account of the historic flight of the Hungarian squadron of Hussars, deserting the Austrian army to aid their own fatherland, is most effectively reproduced. Richard Baradlay and his two hundred and odd men literally go through fire and water in their escape and the whole episode must be read to be appreciated. Richard Baradlay's mother is a noble type of womanhood, self-contained, self-sacrificing and determined—of such women, heroic and honest, history, to the credit of humanity, has many to show. Edith Leidenwall is one of those lovable women who deserve all kinds of happiness and domestic felicity and this she attains as Richard Baradlay's wife. Alfousine Plankinhorst is an interesting sketch of the political adventuress and her character is the very antithesis of Mme. Baradlay's, and as one reads one unconsciously begins to wish she may come to an evil end. One of the finest passages and most interesting incidents in the book is Jenos' sacrifice by which he meets the death which should befall his brother. We cordially recommend the novel to any one wanting a living picture of Viennese and Hungarian life in the revolutionary period of 1848.

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#### Books Received.

GEORGE NEWNES, LIMITED :—

The Life of a Century. Part VIII ... ... 6d

CAMBRIDGE UNIVERSITY PRESS :—

Two Lectures introductory to the Study of Poetry, by H. C. Beeching, M. A.

An Outline History of the British Empire from 1500—1870, (The Cambridge Series for Schools and Training Schools.)

Western Civilization in its Economic Aspects (Ancient Times) by W. Cunningham D. D.

GRADUATES TRADING ASSOCIATION, MYSORE :—

Æsop's Fables. Part I. Translated by Pandit S. M. Natesa Sastri B. A.

GEORGE BELL & SONS :—

The Career of Beauty, by John Strange Winter.  
Under the Red Woods, by Bret Harte.

OXFORD UNIVERSITY PRESS WAREHOUSE :—

The Cowper Anthology 1775—1800 A. D. Edited by Prof. E. Arber, F. S. A.

RALPH HOLLAND & CO. :—

Psychology and Education, by T. E. Margerison, M. A., (London.)

Ethics & Education by T. E. Margerison.

Logic & Education by Rev. John Lightfoot, M.A., DC.

MACMILLAN & CO., LTD.—

The Crisis, by Winstone Churchill.

THE UNIVERSITY TUTORIAL PRESS :—

Euripedes : Medea : Text and Notes, Edited by John Thompson M.A. & T. R. Mills, M.A., (Oxon.)

E & S. LIVINGSTONE :—

Botany, Pt. I. (Catechism Series)

RAITHBY & CO., MADRAS :—

Village Police : Power and Duty, by M. Krishnasami Iyer.

Village Police Catechism, by M. Krishnasami Iyer.

LONGMANS GREEN & CO. —

The Map of Life : Conduct and Character, by W. E. H. Lecky : ... ... 5s.

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### Topics from Periodicals.

#### THE MONITA SECRETA OF THE JESUITS.

Our readers might be aware that recently in France there has been exhibited a great deal of antagonistic feeling towards the religious orders. The proposals to suppress some of these orders have given rise to much excitement. One section that has come in for a great deal of wrath is that of the Jesuits. To many who are not aware of the methods of this religious body the hostile feeling exhibited towards them might seem unreasonable. But a close study of their aims and methods tends to confirm the popular notion that the methods of the Jesuits are not above board.

In the July number of the *Humanitarian*, a writer gives an account of the secret rules of this body which are called their *Monita Secreta*. It is strictly enjoined that these rules ought on no account to see the light of day; care should be taken that they do not fall into the hands of strangers and if it does happen "the authenticity of the rules must be denied." The one aim of the members of the society of Jesus is to render it agreeable to the inhabitants of any place in which it wishes to establish itself and to attain this object, its members must visit the sick, the prisoners and the poor people. The members must themselves "appear to be poor, and any property they buy is to be in the names of faithful friends, who will keep the secret." They are expected to try and knock out as much money as possible from widows.

They are to gain the friendship of princes by promising them privileges, such as a dispensation from the Pope if they have contracted marriages within the prohibited degrees. They are told to gain the confidence of princesses by means of their maids. Then they should tell young princes how much easier it is for them than for other priests to absolve them from debts and from impediments to marriage. In short the society should endeavour to gain the favour of princess, great people, and magistrates in each place, so that, should necessity arise, they will act faithfully for it even against their relations and friends.

The members are exhorted to impress on the minds of princes and other influential people that the society of Jesus is the most perfect of all the orders. They must expose the defects of other orders, and if the rival orders should attempt to establish schools where the Jesuits have one, the magistrates and princes must be warned "that such teachers (the rivals) will cause sedition in the State if not hindered, and that society suffices for the instruction of youth." The rest of the *Monita Secreta* or the secret rules give directions as to how to attract

rich widows, how to make widows' children embrace the religious life, how to augment the revenues of the colleges maintained by the Jesuits, how to maintain discipline among its members, how to choose young men for the society and in general how to advance its interests best. In all these rules, the one underlying principle seems to be to somehow or other manage to attain the object. Read, for instance, the directions given as to how rich widows are to be attracted to join the society.

Fathers who are advanced in age, and who are lively and agreeable, should be chosen. The Confessor should induce these widows to make an oratory in their house, to which they can retire from visitors. He should act with prudence as regards changes in the household, but he must gradually change the servants who are not in the interests of the society for others. He should make it his aim to induce the widow to obey him in all things. He should recommend frequent use of the sacraments particularly that of penitence, in which she will discover her most secret thoughts and temptations. He should point out to her the advantages of widowhood, and the inconveniences of re-marriage. He may propose from time to time *partis*, for which he knows she has any aversion; if he know of any one pleasing to her, he must speak of his bad habits and vices, so as to disgust her with second marriages. When he finds her disposed to widowhood, he should recommend to her the spiritual life, not the religious life, but the taking of vows of chastity like Paula and Eustochim. He should keep her as much as possible out of men's society, and recommend her to give alms under his direction. They are not to be treated with too great rigour in confession. The society should place young girls of good family with these widows, who should have governesses chosen by the Confessor, and they should be gradually brought under the influence of the society; those who prove refractory should be sent home to their parents, and described as capricious and discontented.

The directions given to induce the daughters of widows to join the society is still more "jesuitic." Mothers are instructed to mortify their children from their early youth by censures and remonstrances, and principally when their daughters are old to refuse ornaments and dress; they should pray often to God to incline them to a religious life, promising them a considerable dowry if they wish to become nuns. The mothers should talk to their daughters of the difficulties common to all marriages, and those which they themselves have undergone. In short they should so act that their daughters, particularly, wearied of living with their mothers, should think of becoming nuns.

We pass on now to consider the methods advocated for the augmentation of the revenues of the society.

For this purpose the society should endeavour not to admit anyone to the last vow while he is still expecting some inheritance. Everything must be done to aggrandize the society. It is therefore necessary to say con-

stantly that the society is composed in part of members so poor that they would want everything if it were not for the daily liberality of the faithful, and in part of fathers who are poor, but who possess some real estate in order not to be at the charge of the people in their studies and functions, like the other mendicant orders. When gifts are promised and not given at once, the Confessor should remind the donors of their promises, while dissimulating as much as possible the desire of becoming rich. Should any Confessor not be adroit enough for this, he must be sent away, and another put in his place. Different methods must be used to attract prelates, canons and pastors, and other rich ecclesiastics, and little by little to gain them to the society. The Confessors should not neglect to ask their penitents what is their name, their family, their relations, their wealth, and to inform themselves about their inheritances, their intentions etc, which latter they must try to render favourable to the society. The rectors of colleges must endeavour to find out the houses, gardens, etc, possessed by the principal nobles, merchants, middle-class families, and, if possible, the charges which they have to pay, but it must be done with address. When a Confessor has found a rich penitent, he should warn the rector. The point of the whole affair consists in this, that the Confessors should know how to gain the goodwill of their penitents, and of those with whom they converse, and to accommodate themselves to the inclinations of each one. If it happen that widows or rich married people have only daughters, the Jesuits should try to incline them to a devout life, or to that of the cloister, so that, giving them a small sum, the rest of the fortune may, little by little, come to the society; but if there is an only son, he should be attracted at any price to the society, and one must divest him of all fear of his parents.

In order to attract young men who are students to join the society, the rector and masters are asked to show them great affection out of school hours, and let them sometimes mix with the Jesuits at recreation time, let them become familiar with them, avoiding, however, the familiarity that breeds contempt. They should be warned not to disclose their wish to join the Society to their friends, or even their parents, before they are received.

The final directions conclusively show that the public feeling against the methods of Jesuits is not without foundation.

All the members should try, even in things of little importance, to be of one mind, and in any case to say so aloud; so the society will augment and be strengthened. They should try to shine by their knowledge and their good example.

They must make kings and princes to approve of the doctrine that the Catholic faith cannot subsist without politics, but it is necessary to employ much discretion. It is often of advantage to nourish secretly and with prudence the discords of the great, even by mutually ruining their power. If it appear likely that they may be reconciled, the society should try to make them agree, lest it be forestalled by others. It should try and seize the Bishoprics and dignities, and even the Papacy should be held by members of the society. Little by little its temporal interests should be extended; it is not to be doubted that it would then be a golden age, the blessings of continual and universal peace would

be enjoyed, and consequently the Divine benediction would accompany the Church. If this be not possible, politics must change with the times, and so the princes, our friends, must be induced to make terrible wars, to the end that everywhere the society's aid may be invoked, and it must be employed in public reconciliation; it may be rewarded by the principal benefices and ecclesiastical dignities.

Finally, the society, after having gained the favour and protection of princes, will try to be at least feared by those by whom it is not loved.

#### COUNT TOLSTOY.

Some of our foreign exchanges are rich in luminous pen-pictures and characterisations of this great and gifted genius of Russia. The June number of the *Century*, the *Idler* for July and the *Review of Reviews* for May and June are among those that have devoted much space to a discussion of his theories, teachings and ideals. Two circumstances have brought Tolstoy's name more prominently before the public than it has been for some time past. One is his excommunication by the Holy Synod, and the other the news that he is engaged upon a new novel which is to embody all his moral and social doctrines. Tolstoy as philosopher, prophet and man is quite familiar to most readers, but the saint at rest from his labours, or engaged in the perfecting of his own ideas, is not quite well-known. His appearance has often been described, but the following from a character sketch in the *Review of Reviews* by Mr. R. E. C. Long who dwells lovingly upon his subject is worth reading:—

It is the appearance of an intellectual fanatic, but not of a dreamer. He is of middle height, and the peasant's blouse puffed out behind his shoulders produces the impression of a distinct stoop. His expression, like that of Turgenieff, has been likened to the expression of a transfigured muzhik. But there is really nothing about him resembling the Christ-like peasant at his best. His face is rude, his nose broad with dilated nostrils, his mouth coarse and determined, and his forehead high, but sloping towards the top. His eyes, small, light grey, and deeply sunken, glitter out from underneath shaggy, protecting brows.

The whole expression of his face is ascetic and irritable, with a dash of Tartar ferocity coming from the eyes. Trimmed and moustached, it might be the face of a Cossack officer, but it is never that of the dreamy and benevolent peasant. The general impression one would draw from a first glance is quite in accord with the glimpses which Tolstoy has given us of his past life. It is the face of a man with the moral instincts and moral inclinations of the ordinary man, but who differs from the ordinary man, in that his whole being is dominated by a fanatical intellectual earnestness, who therefore, in the first struggle between instinct and conviction, would surrender immediately to conviction, but it is the face of a man who, while absolutely unshakable in his convictions, sees things as they are, and is under no delusion as to his ability to change them.

On the subject of war and peace Tolstoy's views

are strikingly original. He still adheres to the opinion he expressed in "War and Peace." He does not believe in anything like military genius, indeed he has never been able to understand what is meant by that term. He goes on to say that battles are won by force of circumstances, by chance, by luck. Tolstoy's interest in public affairs was greatly stimulated by appeals for his opinion from England and the continent, in 1899, when the South African War had not assumed an acute form and the one great subject of interest was the Tsar's proposal for a Conference. His reply was a long one but the following excerpts will show his opinion :—

The first reason, why Governments cannot and will not abolish war is, that armies and war are not accidental evils, but are symptoms and essential parts of Government as it exists itself. When I say, therefore, that the Conference is hypocritical, I do not mean that it is intentionally so. But when you declare your intention to do something which cannot be done without changing your whole life and when you do not intend to change your whole life, you must be a hypocrite. Thus the Tsar's proposal is a hypocritical proposal, and its acceptance by other nations is a hypocritical acceptance, without any faith in its success.

You see that the Governments are proposing merely to conceal the symptoms of their own disease by diminishing the opportunities for war. By such means they think to turn the minds of people from the true remedy, which is only to be found in their own consciences. Yet they cannot succeed even in this attempt. A conference summoned by Governments cannot in any way lessen the dangers of war or even diminish its evils. Because there can be no trust between two armed men who imagine that their interests are in conflict. They cannot agree to limit their armaments, because they have no faith in one another's promises. If they had faith in one another's promises they would need no armies at all. And if it is not necessary to have a million men to decide a quarrel, why is it necessary to have half a million?

Why not a quarter of a million? And if they really can decide to equalise their forces at a quarter of a million why not ten or one? The reason is that they do not trust one another.

The conclusion is that if all men were guided by their conscience and trusted one another, there would be no Governments and no wars. From the subject of wars, Mr. Long throws himself into speculations of an abstract sort and asks himself as to what the great philosopher would do to save Russia, if given supreme power. Tolstoy is plain and categorical on this point. He denies at the outset that Western institutions are a stereotyped model upon which all reforms should be based. For "It is this delusion," he says, "that is at the bottom of half the wars and predatory aggressions carried on by Europeans against men of other races. The western system fails to ensure real morality in the west." It is only by developing the conscience and moral sense of mankind whether in

Russia or elsewhere that one can look for any improvement in their condition.

Example is better than precept and the reader may be naturally eager to know how far the Count applies his principles to his daily life. We are told that the

dualism of Count Tolstoy's mental equipment, which is the first thing noticed by a stranger, serves him in good turn and relieves him of the necessity of compounding with his conscience. For if, as an ethical teacher, he professes doctrines which, in the present state of things it is impossible to apply consistently with efficiency as a worker and reformer, as a practical man he sees at once the limitations which must be placed upon these doctrines. He is content to observe his abstract rule of life as far as is consistent with the highest efficiency as a worker and an example. He sees that if he were to observe his doctrines literally, he might attain M. Pobyedonostseff's ideal of "the Salvation of his own soul" but his value as a reactive force would be destroyed. And he prefers to risk the loss of his own soul by compounding with practical life rather than to destroy the special opportunities afforded by the position which he holds in the world. Thus we see him daily denying all government yet approving or condemning on their individual merits the actions of governments, refusing to pay taxes, yet letting them be paid for him; despising industry, yet helping and sympathising with industrial workmen; and rejecting the rights of property, yet sometimes taking for his own writings money which he knows he can employ to better purpose than those who would otherwise gain the profits, as he did with his novel "Resurrection," which was written for the purpose of raising funds to assist the emigrant Dukhoborts. Everywhere the so-called teachings of Tolstoy are qualified by the necessities of his daily life. His rule of life is observed closely, but only when it does not diminish his power for practical good.

Tolstoy seems to have small opinion of English literature in general because it lacks what he regards as an essential—a philosophical basis which is the characteristic of Russian literature. Of modern English books he reads large numbers, and with eighteenth century writers he seems to be familiar. He says :—

"The best of your novelists, beyond all comparison, is Dickens. For humour and truthfulness to life no one has rivalled him. But the general reproach among English novelists may be made also against him."

The Count bursts into a loud praise on the mention of Goldsmith and has great liking for the Vicar of Wakefield. Advising a friend to read it, he remarks;—

"I have read it again and again and every time find something more beautiful on each page. It is a wonderful story."

Strangely enough he seems to admire the plot of the story, and especially the incident of the reformation of the criminals more than its humour. Of Goldsmith's other writings and poems he seems ignorant. English philosophy he has read, and alludes to Berkeley with warm approval, saying.—

"He was an idealist of a high type. His writings have immense moral value." But he dismisses Gibbon indignantly, declaring that his attitude towards Christianity has caused immense injury. And he has also no admiration for English poetry and drama. Speaking of Shakespere he bases his condemnation upon

"the absence of what I have always looked upon as the first principles in art—proportion and moderation. I cannot find in Shakespere either of these virtues; I cannot see in what his great merits consisted." Of Milton, he said, "I am a great admirer of his political writings; but I cannot see the beauties of 'Paradise Lost.'"

As to American literature, he says that its strength arose from the inherent Anglo-Saxon religious sentiment. He expresses a liking for Emerson, Hawthorne and Whittier but, as the writer in the *Idler* remarks, he seems to have "read at random." Of contemporary writers, he knows some of Howell's novels and likes them, but says:—"Literature in the United States at present seems to be in the lowest trough of the sea between high waves."

On the subject of women, he says that women ought to have all other rights than political; that they are unfit to discharge political duties. He further demurs to the idea that education can change women, asserting that women are illogical by nature.

The evolution of Tolstoy's ideas has been determined by his environment. The days of darkness and aggression are gone and Russia is slowly emerging from the middle ages. It is the land of chronic famine and old oppressions which are still lingering—a soil during a large part of the year parched. A great man in such a land with one well-defined aim may do great things in his own way. If he be a man of the highest genius in literature he may rear a fabric of truths, errors and paradoxes. We, then, may see a man of 'faith' urging a return to a state of nature. Tolstoy is married and has sixteen children. Still he repudiates marriage. He holds that Æschylus, Dante and Shakespere were not great in literature, that Michael Angelo and Raphael were not great in sculpture and painting; that Handel, Mozart and Hadyn were not great in music, and that Napoleon had no genius. He makes some obscure writer a literary idol, insists on the eminence of sundry unknown artists who have painted brutally, holds that some unknown performer outside any healthful musical evolution has given us the music of the future, presents Kutosuff as a military ideal and loathes science that organised knowledge. What the future will do with his doctrines no one can say. The long slow work of developing a future for a country like Russia

may not be the lot of a revolutionary apostle of novel moral ideas. His relation to his own countrymen is, to quote the words of Mr. Long, the writer of the article in the *Review of Reviews*:—

That he expresses, divested of mysticism, the practical religion which animates a large proportion of Russian Sectarians. How far he is right in declaring that the masses of his countrymen are influenced by the same spirit is another question. And even if he is right in this, is he right in regarding racial conditions as the determining factor, and not merely a low state of culture? Either view seems to strike at the general applicability of his doctrines. If the Russian peasant is really the spiritual salt of the earth by history and race, what of the other races? If he is merely a better man because he leads a primitive life, what of his future, and what of the future of the advanced races. For Tolstoy is no dreamer and he knows very well that the machine even of "false civilisation" cannot be stopped.

The answers to these questions put to Tolstoy, the practical man, are given by Tolstoy, the academic thinker, who replies that consequences matter nothing as they mattered nothing to the preacher of asceticism in "The Kreuter Sonata." Let each man settle with his own conscience. The rest may perish.

For an elaborate criticism of Tolstoy's moral theory of art we refer our readers to a learned article in the June number of the *Century*, an adequate summary of which is impossible within the space at our disposal.

#### MODERN MILITARY TRAINING.

The July number of the *United Service Magazine* contains some good articles of interest to military readers, particularly a suggestive paper on the above subject by a 'Staff Corps Captain.' The writer gives a candid analysis of things seen or heard about the conduct of the war in South Africa which has been productive of much good in rousing military enthusiasts as to many weaknesses in the system of training troops. He lays down four principles upon which the training of all troops should be based: It is not possible to lay down tactics and drill that will exactly suit every varied circumstance; only general principles can be laid down and then men taught to intelligently apply these principles. It is here, says the writer, that our troops fail, by a downright "disregard of the most elementary principles, generally due to ignorance." Now as to the *first principle*: the first and one of the most important is *discipline* without which the most highly trained troops will be useless. It will be conceded that in this respect our troops are magnificent and we are, therefore, only warned against a deterioration of this spirit of discipline.

The *second principle* is the "highest possible physical development" which, of course, is recognised universally and for which great efforts have been made in recent years. But there seems to be room for improvement and the author suggests

that men ought to be more practised in marching, not in increased distances but more frequently, and uniformly throughout the year instead of as at present practically only during the drill season. The results of mental training will last, but physical training will not, and after a very short period the effects will wear off; and it may be just when they are required for service that men will be found unfit. There is no reason why men should not be marched frequently all the year round.

#### Add further

the taste for games and sports ought to be encouraged in every possible way, and men who will not take part in these games ought to be kept up in their staying-powers by more marching.

I do not mean more drilling on a barrack square but plenty of intelligent field work, such as scouting etc.

The *third principle* is that of "Independence, self-reliance, resourcefulness and common-sense" which, the author remarks, was conspicuous by its absence in South Africa.

All the cases of clumsy scouting and failing to take advantage of ground and opportunities, etc., can be traced to the lack of training in this principle.

During the training of troops, from the recruits' drill to manoeuvres, this principle must be carefully kept in view and every possible opportunity given to troops to use their own wits and act independently, so far as is compatible with their position.

The *fourth principle* is "Greatest Efficiency in Professional Knowledge."

Leaving aside these principles, the conclusions from the results of the South African war seem to point to the immense value of the individual training of a soldier.

As soon as possible after a recruit joins, his training in the third principle should begin; it is ruinous to this principle to keep a man as at present right and left turning on a barrack-square for weeks. As soon as he knows the ordinary words of command and can move with other men sufficiently well to be handled by a non-commissioned officer, he should only have sufficient of formal drill to make him capable of being handled in a body with other men.

And in the earliest possible stage of training the recruit ought to be

taken into the country by specially selected non-commissioned officers, and taught to note features of country, and judge distance and be shown maps and taught to read them, move from one given point to another by themselves, and have pointed out to them how they can best move about without showing themselves, etc.; also to note objects for finding one's way and *write them down*, such as "Path turns to right at rock, move straight on to white house and turn to left at well, again to right at large tree," etc.

The author then animadverts upon the present system of company and squadron field training which, in his view, is wrong in principle:—

I would lay it down as an invariable rule that all Field Training of troops *must* be done with opposing forces, and I cannot see why there should be any difficulty, but

apparently there is, (either from bigoted conservatism or downright slackness and want of interest in soldiering on the part of officers) about any two commanding officers, say of a cavalry and of an infantry regiment, arranging for their companies or squadrons to be opposed to one another whenever there was leisure and opportunity.

With regard to field firing in brigades or divisions, he thinks the training is of the greatest value owing to the attention with which commanders of units have to watch where men fire to avoid danger. Another subject that is not paid attention to is instruction in sketching and making reports.

As many men as possible ought to be constantly trained at this work and whenever men are out reconnoitring they should be encouraged to send in reports and sketches. It will train men to observe country and to orientate themselves, and judge time and distance, the latter is picked up more than one would think by constantly reporting on and sketching country; and is a most valuable quality in a soldier. This question of judging distance is one of paramount importance and the more the recruit and trained soldier are kept out at field work and reporting and sketching the better they will be able to judge distance.

The culminating point of all training is the training of troops in divisions. The author begins with the general system of conducting manoeuvres and field days, pointing out that a great drawback to the time-limited field days is that commanders rarely, if ever, attempt out-manoeuvring their opponents or adopt any methods that might come under the head of cunning. In dealing with the question of issuing orders, he observes:—

In spite of all the books and orders on the subject over and over again one sees a commander of a force ordering the officer commanding a unit to move in some particular formation or when to open or cease fire, questions which can only be decided by the person on the spot; this may lead to all kinds of blunders, and is just the way to destroy men's independence. As I have already stated commanders must assume that their subordinates are reliable.

A summary of all the suggestions made under numerous headings in regard to military training would be impossible and would require more space than we can conveniently find for it here. To sum up (1) Spare no pains to make the individual soldier as intelligent and physically fit as possible by careful personal instruction and training. (2) Eliminate everything that tends to make men mechanical in their thought or actions. (3) Let all work in the nature of manoeuvres be carried out in every possible detail as on service and do away with ordinary field days. (4) Let every one, even the private, in manoeuvres know what he is driving up. (5) After manoeuvres have the whole work gone into in the form of a lecture and thoroughly criticised. The great end to aim at is the quick application of knowledge at the right moment, not a large quantity of knowledge.



## GEOLOGY IN THE TWENTIETH CENTURY.

Dr. Keys handles this subject in a clear and simple manner in the July number of the *Arena*. The progress of geology in the nineteenth century has been more marked than in all previous time. A century of active, fruitful and systematic effort has not only resulted in very great advancement but has introduced into the science of earth-study, a multitude of ideas entirely novel. The determination in the rocks of a measure of time has given to earth-study much of its wide-spread interest. Before this geology was hardly anything more than a monotonous description of minerals. Now it is thoroughly philosophic, it treats of cause and effect, of process and product, of events and their sequence. The rise of modern geology dates from the establishment of a geological time-scale. Up to the close of the eighteenth century, the conception had only been faintly outlined by the contemporaries of the great Werner and Hutton. In England, William Smith had already discovered the key for recognising certain strata by the fossils that they contained. But it remained for the master mind of Lyell, a quarter of a century later, to develop the idea into an actual working scheme of geological chronology. Henceforward, so all-absorbing became the study of the ancient organic remains, as a means of paralling rock strata in all parts of the globe, that for fifty years all other branches of geology seemed, in comparison, almost to be at a standstill.

The newly established time-scale in geology stretched out the age of our earth enormously beyond the generally assigned Biblical period. From 6,000 years, the geologist's best estimates were for more than 25,000,000 years for the stratified rocks alone. At once the theologians arrayed bitterly against them. As in so many cases when science has come into apparent conflict with religion, the scientists went quietly along with their work of searching after truth only—and won. Now there are no longer hostile camps; and many an eminent divine has become an ardent student of Nature.

The proving that there existed in late geological times a vast polar ice-cap, reaching down in this country to the latitude of Cincinnati and St. Louis, may be considered as one of the grand triumphs of science. Until a generation ago, scientists had no idea that an arctic climate had prevailed so recently over the northern hemisphere. It was a veritable Ice Age; and "its conception is one of the scientific novelties of which," says a recent writer, "our century may boast and which no previous century has even so much as faintly adumbrated."

The honor of launching upon the scientific world, the general theory of glaciation belongs to Louis Agassiz.

During the last ten years no branch of geology has produced so voluminous a literature. The subject is constantly expanding at an astounding rate. All earth students are brought more or less closely into contact

with glacial phenomena; many geologists are devoting all their energies in this direction. In Europe the names most prominently associated with glacial work are those of Penck, Geikie, Croll, and Schmidt—in this country those of Chamberlain, McGee, Dawson, and Leverett. As long as geology lasts the works of these scientists will remain classics.

William Smith's discoveries concerning the fossils in the rocks were epoch-making in directions other than purely geological.

Comparisons of successive faunas showed that the later-formed rocks contained organic remains very nearly like those living, but that as we examine older and older strata the fossils become more and more unlike present forms.

But a new epoch begins with the placing of mining upon a truly scientific basis. To have one of the greatest industries brought under rational control is a feat comparable to any discovery in pure science or any production of art. From time immemorial mining has been the great game of chance; up to the time of the establishment of modern geology there was an excuse for haphazard mining.

Although the ordinary miner is still slow to grasp the advantages held out to him by science, every large mining enterprise now has the geology of the district carefully examined before the first shovelful of dirt is turned. Most of the great mining companies even have a regular geological corps employed all the time. One of the greatest petroleum concerns at present operating owes its immense success, not so much to questionable business methods, as so often claimed, as to far-sightedness in employing at a large salary the scientist who worked out, by purely scientific methods, the geology of natural oil.

Mining to-day is capable of being put on as secure a business foundation as any manufacturing enterprise.

The microscope reveals a new world to the students of animals and plants. Its use in the study of rocks is vast:—

Under the microscope the dull gray granites break up into brilliant hues that rival the rainbow. The gorgeous stained-glass windows of many cathedrals give but a faint idea of the wondrous beauty of the rock mosaic. But this is not all. A moment's viewing under the microscope tells the essential chemical and mineralogical composition of a rock with greater accuracy than the most refined chemical analysis. The mineralogical changes that a rock may have gone through are also evident. A rock may be metamorphosed beyond all recognition through ordinary means, but in thin plates its original condition is at once disclosed.

Most persons are not accustomed to cycles of development to the land forms they see round them:—

Of recent years the geologists have demonstrated that all those phenomena connected with land waste go on with far greater rapidity than is generally supposed. Mountains are high and rugged because they are very

young. Without constant uplifting the greatest mountain chain would soon be planed down to flats lying but slightly above sea-level. Such a flat has approached its base-level of erosion, or is a peneplain, and it is the ultimate condition to which all erosion tends to reduce every portion of the land surface. Such a peneplain uplifted into a general upland soon becomes trenched by deep narrow valleys. These are widened out until the relief becomes intricately dissected and diversified. The divides are then lowered, the streams lose most of their former velocities, and the whole region again finally approaches the condition of a base-levelled plain.

This doctrine that all land forms have had a history is a fundamental tenet of our new geography and is distinctly American in origin. The names of Dutton, Powell, Gilbert, Davis, McGee are connected with this work.

The principle of mutation of organism has been appropriately extended to the rocks. Probably no more startling statement was ever made than that "rocks grow." Now at a single stroke the entire idea is swept aside. Professor Judd, the distinguished President of the Geological Society of London, would have the barriers now set up between the mineral and the organism wiped out altogether. In closing a recent address he observed :—

"In the profound laboratories of our earth's crust, slow physical and chemical operations, resulting from the interaction between the crystal, with its wonderful molecular structure, and the external agencies that environ it, have given rise to a structure too minute it may be, to be traced by our microscope, but capable of so playing with the light waves as to startle us with new beauties and to add another to 'the fairy tales of science.'"

That rocks are dependant for their form structure upon their environment and that they are altered by every change of their physical surroundings is a conception the effects of which upon geological science are difficult to realise." The central idea is that in the rocks

there are ever going on changes that are analogous in nearly every respect to those that we usually ascribe only to animals and plants. As the organism is made up of multitudes of small parts which we call cells, each leading a more or less independent existence, so the rocks are formed of myriads of separate mineral particles, each of which also has a distinct personality, follows a more or less individual course of existence, and continually undergoes change as the surrounding physical conditions change. In fine, the life and changes in the organism and in the rock are not only very much alike, but they are, in all probability, merely somewhat different expressions, of the same great laws.

In speaking of organisms, Huxley has referred to life as a "property of protoplasm." The day may not be far distant when we have to modify this definition somewhat, and say that "life is a property of matter." Then may we consider not death, but life, as omnipresent and everlasting existing wherever matter manifests itself.

#### GURU NANAK.

In the *Theosophical Review* for the month of July, Mr. Betram Keightley has written a very interesting sketch of Guru Nanak, the founder of the Sikh Religion. By way of introduction to the subject of his paper, Mr. Keightley in a few succinctly written paragraphs gives a short sketch of the bare outline of the general history of Northern India in post-Buddhist times, in order to give his readers some idea, however vague, of the events preceding the Mahomedan conquest. Continuing his brief historical sketch of the Mahomedan period he points out that by the time Baber founded the Moghul Empire at Delhi, the Punjab and indeed a large part of North-Western India, were already inhabited by a population of exceedingly mixed blood. Buddhism, Mahomedan conquest and Vaishnava revival have all had their influence in the evolution of the Sikh religion. But from the Vishishtadvaita movement of Ramanuja, in its devotional aspect the whole teaching and inspiration of Guru Nanak, the founder of the religion, were mainly drawn; a full third of the *Adi Granth*, the Bible of the Sikhs, is composed of selections from the writings of twelve Bhagavatas, the disciples of Ramananda—the immediate successor and disciple of Ramanuja. Mr. Keightley has based his sketch of Guru Nanak on a version which was current about 60 or 80 years after Nanak's death, and which is recorded in a manuscript discovered by Professor Trumpp in the library of the India Office whither it had been sent with other books and manuscripts by Mrs. Colebrooke.

Nanak was born in April-May of the year A. D. 1469, in a village called Talwandi on the banks of the Ravi, the Hydraotes of the Greeks. His father's name was Kalu, by caste a Khatri, or Kshatriya, of the Vedi family or clan, a plain farmer who also held the office of *patwari*, or village accountant, in the service of the feudal lord of the village—Rae Bular, a Musulman Rajput.

According to the account here summarised, the whole Hindu pantheon appeared at his birth and announced that a great Bhagat or Saint was born to save the world. Similar statements are, as every one knows, invariably current about the birth of every great spiritual teacher, and this so universally that I feel myself very confident that these stories are really expressions of the actual facts as seen on the subtler planes of Nature; but in how far Nanak was spiritually great enough for such a thing to happen, or how far the occurrence in question was supposed by his ardent disciples, in the fervour of their devotion, to have necessarily taken place in the case of their own Guru, in accordance with accepted precedent, is another question.

Little is told of his childhood, except that he did not play like other boys of his age, but was always occupied in his meditations on the Supreme

Lord. At the age of seven, his father took him to a Hindu school to learn to read and write. He is said to have surprised the school master by his superior knowledge, the pupil at once beginning to teach his teacher, when the latter gave him a wooden slate, on which were the letters of the alphabet. This incident has its constant parallel in other cases, and seems to belong to what may be called the typical story-frame of the life of every spiritual teacher.

It is on record that Nanak married and had two sons, who are named, besides a daughter or daughters; but Nanak seems always to have led an unwordly life and got into much trouble with his family on that account.

Nanak went on always keeping company with fakirs, and was averse to any earnest labour or calling, so that he had constant trouble with his family, who even sent for a doctor, and finally considered him a lunatic.

One morning he went to the canal to bathe. Whilst bathing he was transported to the divine presence (Vishnu) where he received initiation as the Guru, a cup of nectar being presented to him with the injunction to proclaim the name of Hari on earth. After this he was brought back to the canal whence he went home, where he was received with amazement, for the servant whom he left with his clothes on entering the water had run home on his disappearance and spread the news that he was drowned, although, when they dragged the canal, no trace of his body could be found.

After this, Nanak divided all he had among the poor, left his house and turned fakir. His first saying: "*There is no Hindu and no Muslim*," made much noise among the people, and he was summoned before the Nawab Daulat Khan to explain his meaning. It was just then the hour of noon-day prayer, and Nanak was seen to laugh when the Kazi said his prayers. On the Nawab questioning him why he insulted the Kazi, Nanak replied that the Kazi's prayer would find no entrance to heaven, because while praying the Kazi's thoughts had been centred not upon God, but upon a new-born foal he had left in his courtyard, which he was fearing might fall into the well. On this the Kazi fell at Nanak's feet and confessed that what he said was true.

His first wandering is said to have been to the *East*. There he came to a certain Sheikh Sajjan, who had built a temple for Hindus and a mosque for Muhammedans. He received all who came to him most hospitably, but in the night, whilst they slept, he murdered them and plundered their goods. Nanak perceived clairvoyantly his character and crimes, proved his knowledge of them to the Sheikh, and convincing him of his evil life brought him to repentance. He also revived a dead elephant, converted a band of Thugs and went through various other adventures. At the capture of Sayyadpur he is said to have been made prisoner by the troops of Baber, but attracted the attention of Baber himself by performing various miracles, and so gained his own release as well as that of the other prisoners.

Nanak's second wandering is said to have been directed to the *South*; while his *third* was to the *North*. On this journey he is related to have visited Mount Sumeru, the seat of Shiva, and to have had a long discussion with

Mahadeva and the Chief Yogins; but there is nothing in the account instructive enough to quote.

His *fourth* wandering is said to have been to the *West*, and to have included a pilgrimage to Mecca. On arriving at Mecca he laid himself down, and by chance stretched his feet (in the East a sign of disrespect) towards the Ka'bah. The Kazi Ruknu'ddin on seeing this reproached Nanak with irreverence towards the house of God. Nanak replied: "put my feet in that direction where the house of God is not." The Khazi turned Nanak's feet, but wherever he turned them, thither the Ka'bah also turned. On account of this miracle the Kazi kissed Nanak's feet, and had a long conversation with him in which he is of course made to be out-argued by Nanak.

The fifth wandering of Nanak is said to have been to Gorakhhatri, a place either unknown or fabulous; at any rate unidentifiable.

The account given by the older biography of the passing of Guru Nanak is as follows:

The Baba came to the bank of the river Ravi, he put five paise before Guru Angad and fell down at his feet; this became known then among his followers. Then among all the society the intelligence was spread, that the Guru Baba was in the house of Chanan; the society came to see him, Hindus and Muslims also came. Then Guru Angad, with joined hands stood before him; the Baba said: 'Ask something!' Guru Angad said: 'Oh king, if it please thee, may that which was broken off from the society, be again applied to (its) skirt!' The answer was given to Guru Angad: 'For thy sake all are pardoned!' Then Guru Angad fell down at his feet. Then the Baba went to a sarhi-tree and sat down under it; the sarhi-tree had become dry and became now green again, leaves and blossoms came forth; then Guru Angad fell down at his feet. Then the mother (the wife of Nanak) began to weep; brothers, relatives, all the followers began to weep. Then the society began to sing funeral songs; the Baba fell into a trance. At that time the order was given and certain verses were made. Then his sons said: 'O father, what will be our state?' The Guru answered, 'Not even the dogs of the Guru are in want, you will get plenty of clothes and bread, and if you will mutter: "Guru, Guru!" the end of your existence will be obtained.' Then the Hindus and Muslims, who were votaries of the name began to say, the Muslims: 'We shall bury him,' and the Hindus 'we shall burn him.' Then the Baba said, 'Put ye flowers on both sides, on the right side put those of the Hindus, and on the left those of the Muslims. If the flowers of the Hindus will remain green to-morrow, then they shall burn me; and if the flowers of the Muslims will remain green, then they shall bury me.' Then the Baba ordered the society that they should recite the praise (of God); the society began to recite the praises... Then the shlok was read: 'The wind is the Guru, etc. When this shlok was read having taken up his feet he fell asleep..... When they lifted up the sheet, there was nothing at all. The flowers of both parties had remained green, The Hindus took theirs and went, and the Muslims took theirs and went. The whole society fell on their knees. Say: Vah Guru! In the Samvat year 1596, the tenth day of the light half of the month of Asu, Baba Nanak was absorbed in Kartar-pur' (A.D. 1538).

Thus passed away the first of the Sikh Gurus, the founder of the community.

## DEPARTMENTAL NOTES.

## Educational.

(By a Headmaster.)

## EDUCATIONAL SCIENCE.

In September next at Glasgow will meet for the first time the new educational section of the British Association. Among its Vice-Presidents are Prof. Armstrong, Sir Henry Craik, and Prof. Miall. Sir John Gorst is President. The section meets on three days. The first, Thursday the 12th, is to be devoted, after the Presidential address, to descriptions of educational work at Glasgow. The next day various aspects of educational-science will be discussed. Monday the 16th will be given to the consideration of the teaching of mathematics, and on Tuesday will be taken up the influence of universities and examining bodies upon secondary schools.

## SCIENCE AT THE LONDON UNIVERSITY.

Readers of the controversy in the papers regarding science at our University will be interested to learn that it is contemplated to exclude the subject from the London Matriculation Examination. If carried out, the change will keep scientific instruction out of the curriculum of secondary schools in the country, and undo at one stroke the reforming work of Huxley, Armstrong, and other eminent scientists. Humanism, then, will have triumphed indeed!

## MODERN LANGUAGES.

At a meeting of the Modern Language Association held on June 26, three resolutions were passed:

"It is desirable that modern languages should occupy a more important position than they do at present in secondary schools." (2) "Additional encouragement should be given to modern languages at the Universities." (3) "The study of modern languages is no less important from a commercial point of view than as an instrument of Culture."

One of the speakers, "condemning the general neglect of modern languages, demanded more efficient teachers specially trained. The popular estimate of the modern language teacher is indicated by the advertisement:—"Wanted a master to teach French, German, Chemistry, and Book-Keeping."

## LARGE BUT NOT EXTRAVAGANT CLAIM.

Sir Richard Jebb, who presided at the above-mentioned meeting, went further than others in his plea for the study of modern languages. He claimed that, when treated as a study of foreign thought, sentiment, and manners, it will tend to promote international good will, and thereby to

safeguard the peace of the world. Ignorance of other people's languages is at the bottom of the prejudices and antipathies which are the impediments to international cordiality, for such impediments vary in strength with ignorance. Without carrying this argument too far, we, who have felt the language difficulty to Anglo-Indians and the barrier it sets up between the rulers and the ruled in this country, cannot but wish that its truth were more generally acknowledged here.

## THE NEW LONDON TRAINING COLLEGE.

The London County Council has resolved to start in October 1902, in connection with the London University a Training College for teachers. The full course of three years will be open only to those that have passed the London Matriculation or some equivalent examination. Students will be enabled to take the London degrees of B. A. and B. Sc., and the teachers' diploma of the same University,—a combination of general and technical instruction which the Madras authorities once favoured but have since abandoned. The school Board for London is expected to allow its schools to be used as practising schools. The Technical Education Board of the London County Council would aim at obliterating all differences between the training of those who intend to become teachers in primary schools and those who intend to become teachers in secondary schools.

## NO END TO REFORM.

Free and compulsory education, established by law, is not the last step in educational work. After nine years of this crowning piece of legislation, there would appear to be still vast work for reformers. Dr. Macnamara has recently been unfolding what he calls the 'humiliating story of England's shame;' and the materials for this indictment he takes from the Board of Education's Annual Return for 1900. The document is entitled "Schools and Scholars in 1901" and appeared as a supplement to the *Schoolmaster* of June 1st. The first complaint is that the attendance of pupils in the public elementary schools is 'atrociously' irregular, fully a fifth of the number on the rolls putting in "anything under 25 per cent of the possible attendances." Dr. Macnamara next points out that as compared with other countries the age at which children leave school in England is too low. But the most shocking fact is that a large proportion of the children have, before and after school time, to work for their parents. The cause of these juvenile bread-winners has often before been pleaded by Dr. Macnamara. A few sentences will be quoted from the reports of Headmasters:

"I understand that some of the little ones work in the quarry before coming to school in the morning, during the dinner hour, and in the evening. Of course, they are not very fit for school work." "One boy begins work for his father as early as 3 A.M., and works again in the evening as late as 9 P.M. He often goes to sleep during morning school from sheer weariness." "Another boy, employed at placing skittles for 34½ hours per week, says he is engaged from 6 to 11 P.M. daily. The lad is often asleep in the afternoon during the progress of the lessons."

#### CANING IN SCHOOLS.

A. B. writes a well-considered article in the *Journal of Education* for July on caning. Assistant-masters everywhere, particularly in primary schools, must feel themselves crippled by the rule that only the Headmaster may inflict corporal punishment. The rule is universally honoured in the breach in Madras, and the same would appear to be the case in the girls' schools of England to which the article refers. The writer condemns the rule as demoralizing both to teacher and taught, not to speak of the principal who has to wink at the illegal practice. The writer concludes:—

And the remedy is so simple! Provide each class teacher with a cane, and give her a legal right to use it. Is it not unreasonable to suppose that a teacher who is fit to take a class, to be responsible for the instruction, discipline, and training of sixty or seventy children, is not equally fit to be trusted with authority to punish them? If this were so—if the long years of preparation for office of responsible teacher, and the opinion of the authorities who select the assistants are to count as nothing—yet the denying of a cane to class-teachers is, as I have pointed out, no check, but rather an incentive, to harsh treatment.

#### THE SUCCESS OF THREE INDIANS.

Among the successful candidates in the final examinations for degrees in medicine and surgery of the Edinburgh University are three Indians—one Bengali Hindu and two Mohomedans. Mr. Manindranath Bose, the Bengali candidate, had been a student of the Calcutta Medical College and went to Edinburgh in 1897. He is the son of Mr. Babu Upendranath Bose, of the Subordinate Judicial Service, Bengal. Mr. Shaik Dawood went to Edinburgh with a scholarship from the Nizam of Hyderabad and Mr. Abdur Rahmankhan Lauddie went from Rangoon where his father is a medical practitioner. Mr. Bose and Mr. Dawood will be entitled to the M. B. and C. M. degrees under the old Regulations of the Edinburgh University and Mr. Lauddie the M.B.; and CH. B. degrees under the new Regulations. We wish these men every success in their career which will probably commence in India.

#### Legal.

(By A High Court Vakil.)

#### LAWYERS AND LAYMEN.

It is a pity that the general sentiment of the community should be so antagonistic to the lawyer. Admiral Commerell has said in his will what most other men feel on the subject. It is impossible to believe that members of the legal profession in England and elsewhere are as greedy and unscrupulous as the admiral represents them to be. There are very bad men among lawyers as there are in any other profession. But the lawyer is resorted to because the client wants assistance from him against the machinations of bad men; and when he realises that it was from the frying pan into the fire that he has helped himself, he is apt to feel very sore. It is all natural, no doubt, but it is absurd to suppose that there are more rogues among lawyers than there are blackguards in any other profession. Here is the advice which the Admiral gave to his legatees.

"Having had fatal experience of the iniquity of the law in certain cases, when decisions have been given against common sense and justice, it is my direction that my two nieces who are intended to benefit by the death of my child or children mean the two eldest children of my sister at the time this will was made, namely, Edith Bloomfield and Kate Bloomfield, and I entreat the parties interested in my will not to appeal to the law if any difficulty may arise, but to arbitration. Having been swindled myself by every lawyer that I ever had anything to do with makes me offer this advice to my heirs, executors and assigns."

#### ADJOURNMENTS OF CASES.

The note of warning conveyed in the memorandum of the Panjab Chief Court to the Subordinate Courts is worthy of consideration by all the Courts in the Presidency. To overcrowd a cause list is the most normal thing in Madras. We know of instances in which clients have had to wait for months together after their case once appeared in a cause list. If it is doubtful whether a judge will attend or not, the usual thing in Madras is to issue a suspensory cause list. Clients and vakils will have to be in attendance every day to be told after coming that no cases will be taken up from the list. In Madras, the practitioner does not count for much, and a prescriptive right has been acquired not to consult his convenience: but beyond the practitioner, there is the party who incurs enormous costs by this practice. We respectfully beg to draw the attention of the learned judges of the Madras High Court and of the City Civil Judge to the following circular issued by the Panjab Chief Court:—

The Hon'ble the Judges point out that their attention has been directed to a large number of civil cases in which there have been an abnormal number of hearings, fixed, sometimes as many as thirty or forty, and nothing done at the majority of the hearings on account of press of criminal and other work.

The Judges say that they are not able to accept this as a sufficient reason for constant adjournments, and think that, if sufficient attention were paid to the preparation of the daily cause list, such constant adjournments, could not occur. Crowding into a day's list more work than can possibly be disposed of is, in the opinion of the Judges, the cause of many of these adjournments, and they consider that more work than can possibly be disposed of should never be fixed for any day (allowing of course, a margin for cases that may go off without a hearing for some cause or another). The result may be that cases may have to be fixed for a very long period ahead—it may be for many months, when a Court has much work—but this, the Judges consider, is unavoidable. The expense and harassment to litigants of frequent adjournments, where Counsel have been engaged, and witnesses brought up, in some of the cases that have been before the Judges is painful to contemplate.

It is furthermore pointed out that it is desirable that when a date is fixed for hearing sufficient time should be allowed for completing the case as far as can be done at that hearing, and that cases should not be heard piecemeal. Cases have, the Judges say, come before them in which a few witnesses in one case have been heard and then the case adjourned in order to hear a few witnesses in another civil case, neither case being exhausted as far as possible on the day of hearing. This, the Judges consider, is a very undesirable practice.

In order, therefore, to reduce as far as possible these inconveniences, the Judges direct that the officer presiding in every Civil Court shall keep in his own handwriting an abstract of the daily cause list, and shall himself fix the dates for hearing, noting by some marks as he enters each case whether it is a short, long, or very long case, and in this way arrange for each day a sufficient amount of work but an amount which he can reasonably expect to get through. Allowance should be made for criminal work that may be sent to him without notice. Divisional and District Judges are requested on their inspections to examine these cause lists and see that they are written up by the officers themselves and show a suitable quorum of daily work. The Judges direct that every Civil Court should furnish among its monthly statements or statement showing (1) the total number of hearings fixed for civil cases in the month, (2) the total number of civil cases decided, (3) the proportion of decisions to number of hearings fixed, (4) the total number of hearings fixed in all the decided cases, (5) the average number of hearings in decided cases, (6) the greatest number of hearings in any decided case. Divisional and District Judges are requested to scrutinise the statement closely and to send an abstract for each Court to the Chief Court. Further, if they find that any officer is incorrigible in procrastination and unnecessary adjournments they should report him with a view to having him deprived of his civil powers.

#### INDIAN LEGAL APPOINTMENTS.

It is impossible to justify the action of the Madras Government in appointing Mr. Justice.

Moore to act for Sir. Justice Subramania Aiyar. The Madras Government has nullified the effect of the concession made by the Secretary of State for India. Long ago, the recommendations of the Public Service Commission were acted upon in Calcutta and in Bombay. The Madras Government alone refused to give effect to it. It was at one time thought that the conservative Secretary of State for India was against a second Indian being appointed. That there was no foundation for this supposition is made clear by the action of Lord George Hamilton in filling up the vacancy caused by the retirement of Mr. Justice Shephard. That it is to the Madras Government that the Indian community is obliged for this want of consideration of its claims is also unmistakable. It has sometimes been said that there is more cordiality between the two races of Her Majesty's subjects in Madras than elsewhere: and the reward of cordiality has been to ignore the claims of the Indian on all possible occasions. Against Mr. Justice Moore, personally, nobody can have anything to say; probably his claims were overlooked for no sufficient reason when his claim to a High Court Judgeship ought to have been recognised. But Mr. Justice Moore himself will not say that his rights should be given effect to in the matter of an appointment which legitimately belongs to an Indian. It was expected that Lord Amphilhil will not countenance the injustice which has been done to the community. His Lordship's action in the matter of the appointment of Mr. Rangaiahariar to the Sanskrit Chair in the Presidency College led us to believe that an Indian will succeed Sir. S. Subramania Aiyer. We hope that when an opportunity offers itself to right the wrong that has been done, His Lordship will not hesitate to respect the claims of the sons of the soil.

#### MAITRE LABORI.

This distinguished French advocate defended Captain Dreyfus before the Committee appointed to enquire into the charges of disloyalty to the Republic preferred against him. In the course of the trial, the advocate who was fired at by a fanatic for defending the accused narrowly escaped death. Such was the ill-feeling which the ignorant populace evinced towards the Captain and his defenders. Of the ability of Maitre Labori, of his eloquence in the cause of his client and of his skill in handling the case entrusted to him, it is not necessary to speak here. Maitre Labori paid a visit to England and the cordiality and affection with which the learned advocate was welcomed in England shows what reward awaits an honest and fearless public man who braves even death in the discharge of his duties.

Maitre Labori was even a greater patriot than the unreasoning mob which howled at Dreyfus and cried aloud that the Republic was in danger. In the eyes of M. Labori, the honour of France was at stake in condemning on secret information Captain Dreyfus. No country can suffer by vindicating justice in the ways open to law. It is only when dubious methods are adopted to bring to book persons suspected of crimes against the country, that there will be danger of the moral basis of good government being undermined. The Judges of England and distinguished barristers vied with each other in showing their appreciation of the fearless advocacy of M. Labori. The distinguished visitor was himself much touched by this exhibition of good feeling towards himself. England has always stood in the forefront of the nations which afforded relief to the weak and to the oppressed; and this graceful reception which the defender of Captain Dreyfus had from the Bench and the Bar shows that England is alive, as of old, to the recognition of the worth of all those who labour without fear or favour in the cause of humanity.

#### CRIMINAL TRIALS IN ENGLAND AND IN INDIA.

"Appellant" writing in the *Humane Review* for May passes a sweeping condemnation on the procedure adopted in criminal trials in England. The article is a very thoughtful one and every lover of justice ought to read it. The outspoken language employed by "Appellant" in regard to some of the trials will be disloyalty in this country. But it is not possible to shut one's eyes to the fact that the defects pointed out by the writer exist in a more aggravated form in this country. The writer thus refers to the distinguishing features of a criminal trial as opposed to a civil adjudication:—

The two great features of English criminal trials which are supposed to secure complete fairness towards the prisoner are: 1st. The necessity of unanimity on the part of the jury; and, 2nd. The principle that the prisoner is entitled to the benefit of every reasonable doubt that arises; to which are sometimes added, 3rd. The Crown Counsel is expected not to press the case unduly against the prisoner; and, 4th. That a Criminal Trial is really an appeal—the prisoner being in substance first convicted by the magistrate, and then by the Grand Jury, before he is placed in the dock for trial.

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The Pioneer.—The arrangement...excellent.  
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The reflections which this enumeration of the essentials of a criminal trial is likely to suggest themselves to an Indian lawyer will not be very pleasant. As everybody knows, the granting of bail is the rule in England and the refusing is the exception and yet "Appellant" grumbles at his being "often locked up in prison previous to trial under very disadvantageous conditions for preparing his defence." What would be an Indian lawyer's substitute for *often* in this clause? A prisoner committed for trial is *prima facie* guilty of the offence and he is not entitled to be released on bail: that is what a lawyer in India is prepared to accede to without demur. "Appellant" is very angry with the police, the London police: we wish that "Appellant" will try Madras for a year and then compare notes. Here is what he says about the police,

Whenever a crime is committed the police are expected to find the criminal and to bring him to justice. They are praised and rewarded when they procure a conviction, they are blamed when they fail to convict any one. The natural consequences follow. They select the person who seems most likely to have committed the crime—often an old offender, because they know that in his case a conviction will be more easily obtained. They work up every point that can be made against him. They refuse to follow up to any clue that points in a different direction. They often, I fear, keep back the points in favour of the prisoner which they meet with in the course of their inquiries. They are not an investigating agency, but a convicting agency; and a far more powerful agency than any at the disposal of the wealthiest prisoner. Indeed, they have powers of investigation which the prisoner has not.

#### THE BOMBAY LAW REPORTER.

The *Bombay Law Reporter* is one of the best conducted of legal journals. Its report of cases is far in advance of all other reports. Its leading articles are very ably written. The article on the Second Appeal Bill in its number for June 15th is the most exhaustive criticism to which the bill has yet been subjected

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## Trade &amp; Industry.

By Mercantilist.

## FOREIGN TRADE OF BRITISH INDIA IN 1900-1901.

The following are the main points in the "Review of the Trade of British India" which was issued by Mr. O'Connor on the 19th ultimo. There was an increase in the value of imports and a decrease in the value of exports as shown below :—

Imports—		1899-1900.	1900-1901.
Merchandise ...	70,71,18,634	76,27,78,853	
Gold ...	11,44,78,674	11,87,13,827	
Silver ...	9,51,06,458	4,59,22,253	
Total ...	91,67,03,766	92,74,14,933	
Exports—			
Foreign merchandise re-exported ...	3,29,24,912	3,20,85,314	
Indian merchandise	105,68,36,961	104,20,53,484	
Gold ...	2,00,81,962	4,30,58,851	
Silver ...	5,94,18,443	3,16,85,700	
Total ...	116,92,62,278	114,88,83,349	

Almost every industry suffered during the year, the cotton spinning industry by the prohibitive price of cotton and by the excessive stocks in China, our chief customer, the tea industry by excessive production and low prices, the indigo industry by competition of the artificial indigo of Germany, the sugar industry by scarcity of the raw material as well as by foreign competition, coffee by limited crops and limited prices and by competition with Brazilian coffee. All manufacturing industry was affected more or less by the high price of coal, although this brought its own compensation in the increased production and consumption of Indian coal. The agricultural conditions were such as to reduce materially the export of good grains, oil seeds and cotton. This was compensated to some extent by increased exports of jute, opium, hides and skins, but the last item of export and the larger importation of food grains indicate the severity of famine and its results. With all these depressing influences, the value of the import trade exceeded that of the past year which is almost a matter of surprise. The Director-General explains that while the cultivators in the famine-stricken area were struggling with adversity, those elsewhere were being borne on a tide of prosperity and consequently imported more goods, the good harvests having yielded large profits on account of high prices.

In the trade in coal, railway material, and machinery and millwork there was appreciable

decline. In drugs, medicines and narcotics, metals, provisions, silk, sugar, woollen goods, the trade somewhat recovered. It appears that 42 lakhs worth of date fruit was imported into India, during the year under review. It would be interesting to know who the consumers are of such a large quantity of the article. With regard to the increase in the imports of sugar, the Director General remarks :—

‘There seems to be sufficient reason for the conclusion that India needs a considerable quantity of sugar of a description which cannot be locally produced for sale at the same price in the economic conditions existing in India having reference to the capital and skill essential for such production.’

Exchange was steady and the bank-rate in Calcutta did not rise above 8 per cent. One note-worthy feature of the currency policy of Government in the year was that the exchange banks imported gold to be rendered to the Government for rupees and that the Government exported gold with which to purchase silver for coining into rupees. The contraction of trade led to reduction in both numbers and tonnage of shipping. For want of export produce, 7 per cent of the steamers cleared in ballast.

## LACE MAKING IN QUILON.

Writing on this subject, a correspondent of the *Madras Mail* states that an exceptional demand has arisen for this hand-made lace and that European ladies purchase large quantities of it either for their own use or for sending it to their friends in England. This lace is proportionately more costly than the European net lace and whether its popularity is due to its durability or to change of taste and fashion is not clear. The following details regarding its manufacture may be interesting to our readers :—

The materials necessary for a start are only a few, and cost but little. A cushion (or as it is commonly termed a pillow) mounted on an oblong piece of plank—the cushion being raised about a foot high on one side and gradually decreasing in its height towards the opposite side, where it is only about an inch or two high, thus forming a gentle decline, with a small drawer at the higher side, into which the lace as manufactured is rolled and kept clean ; a hundred or less number of bobbins made of teakwood or ebony, or even of an inferior sort of wood ; a sheet of small pins and a quantity of thread are all the materials required. Strips of leather about half a yard long and two or more inches broad (according to the width of the lace required) are perforated in curious and special ways, and these straps, or more correctly speaking, these perforations, serve as guides, to the patterns of the lace that is to be manufactured. The first thing that has to be done is to fix the leather strap on the cushion firmly by means of eight or ten large pins. The thread is then rolled into the required number of bobbins necessary for the particular pattern of lace to be made. The cushion,



which is in a slanting position, is then placed in front of the person, and the threads are all fastened at the top of the leather strap. The process of lace-making then goes on by passing the bobbins to and fro and interlacing the thread in a particular manner, the twists and crossings made being fastened to the strap by means of small pins.

#### STATE AID TO INDUSTRY.

*Austria.*—The importance of the use of machinery and the precarious position of hand-workers in modern industrial economy appears to be thoroughly recognised in Austria. In that country, the Government puts every facility in the way of small hand-workers obtaining machinery, either by lending them the purchase money, free of interest, or by letting them hire the machines cheap. Numerous exhibitions of machinery are also maintained, so that the workman may be kept fully informed of the latest improvements and inventions.

*Mysore.*—We learn from a contemporary that an Industrial School has just been established at Hole-Narasipur, Hassan District, Mysore State, where weaving checks of modern pattern is taught to pupils. An earnest attempt is being made to improve this branch of the local industry with the aid of improved machinery.

*Mysore.*—Moulvi Hakim Saib applied to the Mysore Durbar for 60 acres of land in the bed of the Arkvati river, near Alur, in the Nelamangalam taluk, for erecting flour mills to be worked by water-power. The Durbar have passed the following order:—"That taking into consideration that this enterprise is a somewhat novel one, and deserves encouragement, Government are pleased to direct that no *Mohartarfa* need be levied for the present, but a nominal assessment of one anna for all the four bits of land on which the applicant proposes to erect platforms should be imposed."

*Japan.*—The Japanese Association of Exhibitors sending goods to the Glasgow Exhibition are to receive a subsidy from the Government of Yen 40,000. In addition to the articles that were not sold at the Paris Exhibition, and which were removed direct to Glasgow, a quantity of textile goods, carvings, porcelain, and lacquer ware, valued at some Yen 30,000, will be sent direct from Japan before the end of the month, in addition to some Yen 190,000 worth of goods already on the way.

#### AIDS TO COMMERCIAL EXPANSION.

*Greece.*—The Trading Company at Patras has established a permanent sample museum there, for the purpose of extending the trade in Greek industrial productions both for home and export purposes.

*Holland.*—It is stated that, on the initiative of the Netherlands Trading Company, a commercial museum is to be established in Amsterdam. The operations will be those necessary for the extension of export trade by giving commercial information of all kinds, regarding prices, transport routes, freight tariffs, etc., etc., and it is also proposed to establish an exhibition of samples of goods for export.

#### Medical.

*By a Doctor.*

#### AN IMPORTANT MEDICAL DISCOVERY.

A medical discovery, which, if substantiated, will be of the highest importance, is just announced in England, says the *Indian Spectator*. Everybody knows that cancer is one of those dire diseases that defy medical cure. The medical service in Europe has left nothing undone up till now to trace the root of this disease, and to find if there be any microbe there, but without success. It is now stated in England that Dr. Gaylord, a medical professor at Buffalo University, in America, has discovered that cancer is caused by a tiny animal parasite, which he has identified and isolated. Dr. Gaylord will submit a full report on the subject to the New York Legislature, which will undoubtedly be read with much interest by the medical profession all over the world. His contention is that the organism of cancer is undoubtedly a protozoan, and he has, at least, preliminary proof that the bodies he has found are the organisms. The doctor declares that the cycle of development can be observed under the microscope. If his deductions are found to be correct, as we hope they may be, they will eventually lead to the discovery of an effectual cure for the dread disease.

#### DIETETIC VALUE OF SUGAR.

An interesting paper on the dietetic value of sugar appeared in a recent issue of the *British Medical Journal*, from the pen of Dr. Willoughby Gardner. In this, he says that the world's consumption of sugar during the last fifteen years has doubled, while that of Great Britain has trebled per head in the last forty years. The English and the Americans head the list as sugar-eating people. Sugar is a potent creator of energy and maintainer of stamina. This, he contends, is not only proved by laboratory experiments, but by the date-eating Arabs, the fine health of the sugarcane-eating Negroes, and the results achieved by Alpine climbers, arctic explorers, athletes and German soldiers, who were fed on the special diet. Dr. Gardner's general conclusion is that the increased height and weight and improved health of the English people in the last half-century have been largely due to the increased consumption of sugar.

The following are the chief points about sugar as a food. It is easily digested and absorbed. It is readily stored up as glycogen, forming a reserve of force-producing material. It is in this form

readily available when required. It becomes completely oxidized without any waste leaving no residue. Under certain circumstances, it can be converted into fat and so produce heat and force. It can be called a proteid-sparing food. It is pleasant to take, acts as a relish, and stimulates the activity of the digestive processes. So it should be an admirable food, producing heat and energy. It is necessary for growing boys and girls and their nutrition often suffers owing to a popular prejudice against it. It is valuable in cases of anæmia and for the aged. Sometimes sweets harm the teeth, but on account of impurities. Cane sugar is apt to cause an undue secretion of mucus. Those who are gouty and fat must avoid sugar. Thin gouty patients may use it.

#### DIABETES—A SUCCESSFUL TREATMENT.

John B. Hawkes recommends the electric battery almost as a specific in this disease. He cites six cases entirely cured by him. No medicine was given and plenty of fruit was allowed. The faradic current was used at first very weak. The cathode was placed at the base of the spine, while the anode was held at the base of the skull. Sesssions of five, eventually increased to ten minutes, were given. The improvement was extraordinary. *International Journal of Surgery.*

#### COFFEE AS A DISINFECTANT.

The use of coffee as a disinfectant is not perhaps generally known. At any rate it is doubtful if the majority of people are aware of its true value in this direction. In one case, a quantity of meat was placed in a close room and allowed to decompose. A chafing dish was then introduced and 50 grams of coffee were thrown on the fire. In a few minutes the room had been entirely disinfected. In another room, the fumes of sulphuretted hydrogen and ammonia were developed, and the smell—which no words can express—was destroyed in half a minute by the use of ninety grams of coffee. As a proof that the noxious smells are really decomposed, and not merely overpowered by the fumes of coffee, it is stated that the first vapours of the coffee are not smelled at all, and are, therefore, chemically absorbed, while the other smells gradually diminish as the fumigation continues. The merest "pinch" of coffee is usually sufficient to cleanse a sick-room even in aggravated cases. The best way to employ it, is to freshly pound the coffee in a mortar, if no mill is at hand, and sprinkle it on a red-hot iron surface.

#### FRUIT FOR RHEUMATISM.

The use of fruit diminishes the acidity of the urine, and antagonises rheumatism. The acids in fruits undergo changes which diminish the acidity of the blood and aid in the elimination of uric acid. The most digestible fruits are ripe grapes, peaches, strawberries, apricots, oranges, very ripe pears, figs, dates, baked apples and stewed fruits. A dietary consisting wholly of fruits is a valuable means of overcoming biliousness. Such a dietary may be maintained for one or two days or a week. A modified fruit dietary is highly beneficial. The most laxative fruits are apples, figs, prunes and peaches.—*Family Doctor.*

#### SEA-WATER.

We learn from the *Popular Science Monthly* that the Merchants' Association of San Francisco has been trying the experiment of sprinkling a street with sea water, and finds that such water binds the dirt together between the paving stones, so that when it is dry no loose dust is formed to be raised by the wind; the sea water does not dry so quickly as fresh water, so that it has been claimed that when salt water has been used one load of it is equal to three loads of fresh water. The salt water which is deposited on the street absorbs moisture from the air during the night, whereby the street is thoroughly moist during the early morning, and has the appearance of having been freshly sprinkled.

#### ANTIDOTE FOR SNAKE-BITE.

The poison of animals and snakes is intensely alkaline, and sulphuric acid taken internally, and injected hypodermically, diluted or pure, in the fang puncture, immediately kills the poison. This discovery was given by a gentleman who says he has been bitten by snakes and insects over a hundred times.—*Medical Relief.*

#### EUCALYPTUS AND MOSQUITOES.

The *British Medical Journal* doubts the wisdom of the proposal by the Sanitary Department of Havana to plant eucalyptus trees in all the marshy and malarial districts in and around Havana as a mosquito deterrent. It points out that in a paper by Professor Celli, which appeared in the *Journal of the Sanitary Institute* for January, that distinguished authority says that the eucalyptus, so far from being a protection is, like other trees, rather a shelter for mosquitoes, and in the neighbourhood of dwelling-houses adds to the danger of malarial infection.

### Science.

(By a Master of Arts)

#### NEW WIRELESS WIRES.

At Vesinet, on the Saint Germain-en-Laye road, experiments have been made with a new kind of wireless telegraphy. The experimenters are Colonel Pilsoudski, an Engineer Officer in the Russian Army, and M. Victor Popp, a well-known French Electrical Engineer and Inventor. It is claimed for the new system that it is a great improvement on that of Signor Marconi, in that it is more simple. No tall masts are required, and the electric waves follow the surface of the earth. The apparatus consists of two electrodes separated by a distance that varies according to the distance of the place with which it is desired to communicate. The negative is placed on a sheet of glass, as isolator, on the surface, the positive is buried in the earth at a depth of from three-and-a-half to four metres. These two electrodes are connected to the transmitting apparatus. The same arrangement is followed at the receiving station. This is all that is necessary for the despatch and registration of messages. With this new system it is claimed that wireless telegraphy with America will be a simple matter. The experimenters further state that four men can establish a telegraph station within an hour anywhere.—*Daily Express*.

#### CHEMICAL AFFINITY.

The affinity sometimes awakened between two substances by the presence of a mere trace of a third substance is among the wonders of chemistry. Fresh examples of this have been given the French Academy by M. Gustave Le Bon, who has discovered that the addition of one part of magnesium in 14,000 so changes mercury that it rapidly oxidises in the air, and has the property of decomposing water at a low temperature. Magnesium with a trace of mercury, on the other hand, also has the striking new property of decomposing water. In both cases the acquired properties are lost as oxidation proceeds, but aluminium with a trace of mercury seems permanently altered. An extraordinarily small trace of mercury causes it to oxidise rapidly and to decompose water, the reactions continuing until the metal is consumed. Coupled with platinum in a voltaic cell, the electro-motive force is more than doubled, the electrolyte with the modified metal being simply water. Another property given is that of being readily acted on by acetic, nitric, and sulphuric acids.

#### HEAT RAYS FROM THE STARS.

Professor E. F. Nichols has been making some interesting experiments, and has come to the conclusion that the stars transmit heat to the earth. After his experiments, by comparison and mathematical reductions, the Professor ascertained that the heat coming to any point of the earth's surface from Arcturus, one of the nearest fixed stars, is something greater than the heat which would be received at a given point from a candle six miles distant, if none of the candle's heat were absorbed by the atmosphere. Observation on Vega, another fixed star, showed about one half the quantity of heat received from Arcturus. The planet Jupiter sends us about twice as much heat as Arcturus, and from Saturn we receive only heat enough to equal the unabsorbed radiation of a candle ten miles away. The apparatus used in these experiments was so sensitive that the heat of a candle sixteen miles away could be detected if no air intervened to absorb the heat rays. The work was performed at the Yerkes Observatory of the University of Chicago. Professor Nichols has spent two of his summer vacations at the Yerkes Observatory, having all the advantages of the equipment of that institution, and his experiments are considered as marking a distinct advance in modern astronomical science.

#### SIGHT WITHOUT LIGHT.

MESSRS. HIMSTEDT AND NEGEL's experiment in seeking to enable the blind to see by the aid of X rays, ultra-violet rays, and other non-visible radiations have been barren of any very promising result, says the *Invention*. The metal radium, as is well known, gives off certain emanations called Becquerel rays. When a bag containing radium and another containing sand were given to a blind person he was able at first to tell infallibly which one contained the radium.

The conclusion is that the Becquerel rays, being capable of penetrating otherwise opaque substances, must enter the cranium and act on optical nerves otherwise cut off from outside impressions. The practical trouble is that the nerves become tired very quickly when subjected to this abnormal sensation, so that the subject after a few trials is unable to distinguish the radiant from the non-radiant objects.

When the subject is fresh he is able to get impressions of geometrical forms when the rays are passed through plates of lead bearing the patterns cut out, the lead being opaque.

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## The Indian Review.

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In the course of one of his budget statements, Sir Henry Fowler is reported to have uttered the following words with much indignation, "I protest against the statement that India has no representatives in the House of Commons. Every member of this House is a member for India." Yet it is reported that he himself left the House at a very early part of the Indian budget debate. And we have the sorry spectacle of 12 out of 670 members being present on the day when the affairs of "the brightest jewel on the Crown" were discussed. A few hours before the budget was taken up, the House was full to see the editor of the *Daily Mail* at the bar but its introduction emptied it. What regard are we to attach to the much-aunted imperialism of the British people who display such contemptuous indifference to the interests of nearly 300 millions of people committed by Providence to their charge, "I am sorry the House is empty" said the optimistic Secretary of State in the course of his speech. Though we are sorry for the paucity of attendance, yet for another reason we rejoice at the small number, for it is something gained if the absent members have not heard the roseate and misleading account which Lord George gave of the wonderfully brilliant financial condition of India.

"Since the territories of the East India Company passed over to the authority of the Crown, I doubt if any Secretary of State has been able to make a more satisfactory statement as it will fall to my lot to unfold. The surpluses of income over expenditure, including all cost for famine relief, are large, continuous, and progressive. We have had certain windfalls to assist us, but the most interesting features of the figures that I have to deal with are that they show that, notwithstanding the great losses and depreciation of agriculture in the West, taking India as a whole, the vast community within its borders have progressed and prospered, and there has been a distinct economic advance.

Fancy the man most responsible for India's welfare boasting of a distinct economic advance !! With a standing debt of over 240 millions, with interest on it varying from 2½ to 4½ per cent, with a famine, to use the language of the Secretary of State himself, "unequalled in its dimensions, intensity and duration," with a consequent "distress and loss of agricultural property which have not so far as we know been equalled during the last century," with a loss of property among the agricultural community which as regards Western

India alone has been estimated at not less than £ 50,000,000 sterling, with works of famine relief at a cost of £ 15,171,000, with "a loss of cattle and crops greater than any preceding visitation of which we have known," with the passing away from mortal view of 1½ millions of people from famine, with the standing cry of the Government in India of want of funds to undertake useful public works—in the face of all these, Lord George boasts of a prosperous condition of finance and a surplus of a million and a half! Let us not forget that even this "alleged surplus" was the result of a windfall, chiefly due to the fact of thousands of Indian soldiers being lent for use in China, the cost of which was borne by the British Exchequer. We have no space and it is not worth while refuting the various misleading statements and figures which fortunately for us the Secretary of State made before an empty House. We may, however cite a specimen of the remarkable ignorance of Lord George Hamilton. We refer to his statement that there was "no institution in India which was so strongly impregnated with the money-lending influence as the National Congress." Oh! how we wish this were true! For, then, the Congress would be in a much better financial condition and would only be too glad to remit a portion of its funds to friends in England to keep the British public correctly informed about Indian affairs.

"Laws that are made in haste are apt to be repented." These were the words which Lord Curzon spoke on the occasion of the first reading of the 'Punjab Land Alienation Bill.' We sincerely trust the Viceroy will ponder over his own words before he gives his sanction to the bill which has just been forced through the Bombay Legislature. Within the brief space of a note it is not possible to state in detail the various provisions of the bill; this we reserve for a future occasion. But we may here indicate briefly its main objects, and before doing so we may with advantage remind the reader that the note of warning which was uttered by the public at the time of the passing of the Panjab Land Bill that the measure was apparently the thin end of the wedge to declare through the legislature the theory of State-landlordism, has been realised. The ostensible object of these two bills is to protect the agriculturists from getting into the clutches of the money-lender, but beneath this apparent benevolence lies the assertion of the State to proprietary right over the soil in India. Whether the State or the ryot is the proprietor of the lands in this country is a

vexed question on which volumes have been written. Instead of facing the question frankly and openly, the Government, it seems to us, are attempting to establish this claim by methods which are by no means straightforward. If we have correctly understood the position, what has happened to Punjab and Bombay may sooner or later happen to Madras also. The question, therefore, is of portentous importance to the land-holding classes in India and it is time that responsible leaders of public opinion should concentrate all their energies on this subject. To come now to the main provisions of the Bill. Under the existing law the Government has the right to sell the lands which are in arrears for revenue instead of granting remissions. But according to the bill which has passed through the Bombay Council, Collectors are to be authorised to forfeit any lands for which revenue is in arrears and to re-grant it, if possible, to the former occupants, subject to the condition that the right of occupancy shall lapse if the lands are alienated without permission. The non-official members contend that the theory of State-landlordism, now put forward by the Bombay Government, is illegal and opposed to its previous policy and declaration, that the tenant's right of alienation ought not to be interfered with. They urge that the Bill, so far from bringing any relief or rendering any assistance to agriculturists is likely to do them great injury by making the collection of land revenue even more stringent than it is at present, and by hastening the expropriation of those who are heavily indebted to *sankars*; and that the only party likely to benefit by the Bill is the Government whose revenue will now be collected with increased rigour, who, in those cases which will come under the new law, will acquire absolute ownership for a year's assessment or so of lands worth several times the assessment, and who will in course of time be enabled to claim for the State absolute ownership of land.

We propose to deal with the merits of this bill in an early issue, but we may observe in passing that this most important piece of legislation has been hurried through in an extraordinary and unprecedented manner. Public feeling in Bombay and elsewhere has been deeply roused by the way in which the protests of the people have been disregarded and the scant courtesy with which non-official members of the council have been treated. Of course the official majority could always over-ride the non-officials but it is impolitic and unjust to disregard their unanimous protest and ride rough-shod over them. The words of the poet which the Hon. Mr. Gokhale quoted in the course of a most lucid and eloquent speech have great significance.

"Oh it is excellent to have a giant's strength,  
But it is tyrannous to use it like a giant."

The lamented demise of Sir K. Seshadri Iyer on the morning of the 13th inst. in his residence at Bangalore, removes a conspicuous figure from the ranks of modern Indian statesmen who in the various Native States of India, are doing a most creditable work, establishing order and method in the administration, stimulating material progress and more or less bringing those States in line with British India. While British statesmen like Lord Dufferin have freely admitted that the present condition of Native States, with a few exceptions, has fully vindicated the wisdom of the policy adopted twenty-five years ago by Sir Stafford Northcote and Lord Cranborne, in their decision not to annex Mysore to the British Dominion, no Native State has vindicated it more thoroughly than Mysore itself under the direction of the deceased statesman. That policy as then enunciated was that British rulers of India "should, as far as possible, develop the system of native Government to bring out native talent and statesmanship and enlist in the cause of good Government all that was great and good in them." The history of Mysore under the guidance of Sir K. Seshadri Iyer during eighteen years affords the amplest proof possible of native talent and native statesmanship of the very highest order developing under favourable circumstances and helping in the cause of good government and growth of popular contentment. From a condition of indebtedness and comparative confusion, Sir K. Seshadri Iyer raised Mysore to a state of enviable prosperity and progress. When he assumed the office of Minister in 1883, Mysore had just emerged from the effects of an appalling famine which had swept away one-third of its population and merged the State into debt.

But undaunted and impelled by personal ambition and by a keen consciousness of the great responsibility resting on him in working out a great political problem regarding the fitness of educated Indians for high offices of State he applied his rare talents, courage and self-confidence for the fulfillment of the task. We need not do here more than refer to the wonderfully rapid progress that was made in the prosecution of public works, not only of railways and irrigation works, but of bold schemes of industrial progress which would have daunted other minds, but which he fearlessly launched, to the measures of economy and efficiency he introduced in the internal administration, to the deep interest he took in the progress of education, more especially of female education, to the stimulus he imparted to the growth and free expression of public opinion; and to the removal of certain serious social evils by cautious legislation.

To the marvellous success of Sir K. Seshadri Iyer, he was indebted not only for his earnestness and administrative ability, but also for his rare intellectual power. He often succeeded in bringing down expert talent, and proved that schemes which experts argued would prove failures could be successfully carried out and he did so carry them out. Public works were his special portfolio and reputed experts often stood aghast at his wonderful intellect and range of information which altogether confounded them, while, like all successful men, he was absorbed in the duties of his office. He was in his practices and beliefs a true Hindu of the orthodox but enlightened type and as one of his most admiring English friends, the late Sir William Hunter, said, he gave his head to Herbert Spencer and his heart to Parabrahman. He was only 56 years old when he died.

The sympathy of the civilised world would go forth towards the American nation which has just now been thrown into deep gloom by the tragic end of the President of its great Republic. On the 7th instant while President McKinley was holding a reception at the Buffalo Exhibition, an anarchist named Czolgorz fired at him twice, once in the chest and once in the stomach while in the act of shaking hands. He was immediately attended to by the Doctors and for a time it was expected the wound would not prove mortal. But an unexpected change for the worse set in and the President breathed his last on the 14th. It is reported that he was unconscious for a few hours before his death and that his last words were, "Good-bye all, good-bye; 'tis God's way; His will be done."

Mr. McKinley was born in 1843. After passing a few years at school, he entered the army in his eighteenth year as a Private in the Union Army during the Civil War. His courage and vigour in the field soon brought him to the position of Captain and Brevet Major. He however soon changed his career for the bar and began practice in Ohio. His abilities and patriotism were recognised by his constituents and in 1876 he announced himself as a candidate for Congress. It was not because his "friends were urging him to return." He made no such false pretence as is so common now-a-days both here and elsewhere. He wanted to go to Congress because he believed he was capable of doing good service. He was elected and for twenty years till 1890, he was returned unopposed. From 1891 to 1895 he was

Governor of Ohio. In 1896 he was put forward as a candidate for the Presidential election. He was successful, and till the moment of his death he justified the confidence of his nation by his strong sense of duty and his honest determination to make them materially rich and great. President McKinley has been described to be a man emphatically of one idea, and that is that the industries of the United States are impotent to hold their own in the home market against the manufactures of Great Britain. This idea he never concealed. In fact he put the question of protecting American manufactures from British and other foreign imports in the forefront of his Republican platform and won his high office of President on this issue. One of his first measures on assuming office was to pass a Tariff Act. His attitude towards the Philippine trouble and his final declaration of war increased the love of the American people for him and to-day the nation will be in great mourning over his tragic death.

It is satisfactory to read that the newspapers are universally engaged in discussing the question of dealing with anarchists and are advocating another International Conference with a view to organising an International Police to specially watch them; also the punishing of Anarchist propaganda as a crime. It is to be hoped that, unlike previous attempts at the suppression of anarchism, the present efforts will result in some tangible methods for its suppression. In any measures that may be adopted at the proposed Conference, no quarter ought to be shown to the anarchists. Within the last quarter of a century the progress of anarchism has been rapid, and its disastrous effects have resulted in the assassination of President Carnot of France, Canovas of Spain, the Empress of Austria, King Humbert of Italy, not to mention the attempt on our own King a few months ago. With a strong and deadly hatred against the moneyed class, refusing to recognise the rights of private property, recognising no master, distrusting every form of sovereignty and with no faith in God, this dangerous species of human beings have been spreading their vile teachings among the ignorant populace and exciting them in all possible ways. Czolgorz, for instance, distinctly confesses, he acted solely under the influence of anarchist literature and lectures. The sooner steps are taken to prevent the spread of such obnoxious teaching the better for all humanity.

## FUNCTIONS OF GOVERNMENT.

FEW persons are aware of the extent to which the famous saying of Sir William Harcourt applies, "We are all socialists now." There is a growing disposition to clamour for more official interference and control in every department of life. Emulating the wazgoner of the fable, there is a growing tendency in modern times to call upon the Hercules of legislation to do what each individual might reasonably be expected to do for himself. People talk glibly of the duties of the State, of the functions of the Government, of collectivism and altruism, and of the supposed right of everybody to obtain ease and comfort at the expense of somebody else. Work and duty have come to be regarded as necessary evils, to be endured if inevitable, to be evaded whenever possible. The minimum of perfunctory service is rendered, in return for the maximum of wages that can be exacted. Well-meaning but mistaken philanthropists hope to cure human ills by compounding a universal syllabus, but they fail to take into account the unchanging human nature that produces those ills. It is also supposed that resolutions passed at excited meetings, and fresh enactments on the statute book, and additions to the cumbrous and creaking administrative machinery will effect the desired industrial and social changes.

We seem to be harking back to Plantagenet times and methods. The prevalent opinion then was that men and women were all children of a larger growth, who needed to be inspected, coerced, restrained, controlled, and legislated for in everything that related to their private and public life. This spirit ran to excess of riot, producing untold and incalculable mischief in every department of human affairs. Individualism was nothing, personal enterprise was discouraged or repressed, the reign of law became an intrusive espionage and a grinding tyranny. People were peremptorily

ordered what to eat, drink, do, and avoid. Their business, their dress, their recreations were prescribed; they were told what to believe and how to worship. No divergence was allowed from the regulation patterns. If these were infringed condign punishment was inflicted. There were minor fines and imprisonments for what were adjudged to be slight offences, while the more aggravated were visited with longer incarceration, heavier mulcts, severe whippings, mutilation, banishment or death. The statutebook became crowded with enactments, many of which were wholly inoperative because of their severity. Mr. Herbert Spencer, in a letter which appeared in 1889, stated, on the authority of the Vice-President of the Incorporated Law Society, that of eighteen thousand public Acts of Parliament passed from 20 Henry III to the end of 1872, four-fifths had been wholly or partially repealed. And that within ten years of the date of his letter 650 Acts of the present reign had been repealed, besides many of preceding reigns. Yet every year witnesses copious additions to our laws by official persons and by amateur legislators, who seem to think that Acts of Parliament serve as charms. We have also any number of "You-shall-not-Societies," formed by fussy and dogmatic people to interfere with their neighbours, and especially with the poorer classes.

For some years there has been a tendency in England to widen the area of Government. The complaint used to be that the dominant policy was *Laissez faire*. Having let matters alone too long, we rushed, as is our wont, to the opposite extreme. We began to interfere with and to control almost everything, in a way that provoked a cry of "grandmotherly legislation." We are in no danger of erring on the side of neglect. The German ideal seems to be attractive with some. They would like to have everything regulated by an unbending official standard, from the cradle to the grave, in business and pleasure, in education and courtship, in war and industry, in literature and

religion, in law and medicine. An appetite for authority is insatiable, and it grows by what it feeds upon. The more grist supplied to the official mill the more does it want to grind. Pigeon-holes, files and letter-books are burdened with endless details. Tons of printed and written matter are issued and received every year; information is requested, complaints are forwarded for remarks, interrogatories are administered, grave or petty infractions of standing orders are rebuked, minutes without end are drafted, schemes are propounded, and rules and regulations are laid down. Day by day reams of foolscap paper are covered with rivulets of ink by the official Rhadamanthus, in "My Lords desire me to say", and in "Having the honour to be", on an endless diversity of topics. About many of these the knowledge possessed by the average official mind may be represented by x.

That vague entity called "the State" has taken hold of a variety of business and social matters, involving the creation of separate or subordinate offices. The mercantile, marine, railways, tramways, gas-companies, electric-lighting, limited liability, bankruptcy, patents, trade-marks, harbours, fisheries, river pollution, manufactures, agriculture, mines, education, prisons, the police, emigration, trade and labour statistics, the poor, the imbecile, lunatics, vaccination, science and art, sanitation, meteorology, charities, *et hoc genus omne* are dealt with more or less wisely. A little army of clerks has to be maintained, and checks, supervision, adjustments, balances and control without end are exercised. There are wheels within wheels. The treasury has the power of the purse over all other departments directly or indirectly, but the so-called Treasury Board has no authority apart from the first Lord and the Chancellor of the Exchequer. A curious illustration of this was furnished last year in connection with the Imperial Institute and the proposed new University for London, when a scheme propounded by those two high officials in the Cabinet received



the formal sanction of "Lords", who of course could do nothing else but ratify the decision of of their superiors. The Secretary of State for India has a Council, the members of which are highly paid, but their functions are purely advisory. The Colonial Office, which rules over our vast dependencies, has not and never had the simulacrum of a Council. The Navy has a Board of Admiralty changing with every Ministry. The Board of Trade and Plantations was originally an offshoot of the Privy Council, as is the newly constituted Board of Agriculture. As Boards, they are purely hypothetical. Neither the President of the Council nor the Vice-President really controls the Education Department. The actual authorities, as in the other instances just named, are upstairs and out of sight; their names are unknown to the public, but they pull wires to which thousands of puppets respond.

Probably, however, the Local Government Boards exemplifies in the most astounding degree the modern bureaucratic system. Nominally, it consists of the President of the Council, the Secretaries of State, and the Lord Privy Seal, but they never meet as a Board, and it is said the official members have never assembled since the passing of the Act that constituted them. It has a President who never presides over anybody, and who vacates his post with every change of Ministry. The permanent secretary, the heads of departments, and the inspectors are the secret force that keep the machinery in motion. Already their duties include the supervision of sanitary matters, questions of local government, the constitution and working and, in part, the nomination of Asylum Boards, the administration of the poor laws, the education of pauper children, the auditing of many complex accounts, reporting on certain private bills before Parliament, and other miscellaneous functions. This abstraction called "a Board" has as many eyes as Argus and as many hands as Briareus. Local authorities throughout the kingdom are circumscribed, inspected, controlled, audited, counsel-

led and checked in endless ways, and new powers are perpetually being conferred or grasped. Indeed one serious phase of the question is the growing habit of inserting in ministerial measures, or of foisting into those brought forward by private members, a clause giving to one or other of those quasi-boards, the power to frame rules and regulations which really amount to legislative authority, under the guise of administrative procedure. Orders issued in this way have all the force of enactments and are virtually subject to no control other than that of the public Press in the case of some flagrant abuse. Parliament ought to retain such powers in its own hands, and ought to guard them jealously in the public interest, instead of permitting various bureaucratic authorities to arrogate fresh functions and to seize upon yet wider powers. The tendency of modern legislation, under official influence, is to strengthen the departments and to liberate them from Parliamentary supervision. A recent instance is that of the Light Railways Act, under which the Board of Trade has acquired powers almost as extensive as those possessed by Parliament itself. Such a method, however suited to France or Germany, is alien to the genius of the English Constitution, and should be vigilantly watched and strenuously resisted. The relations between the Local Government Board and the various local authorities, and those between the Education Department and School Boards have not been so felicitous and successful as to encourage an extension of controlling powers after which official persons constantly strive.

The egregious failure of the present system is seen in what is now transpiring with regard to the gigantic network of district schools for pauper children, each of whom costs 11/ to 13/ per week, and more in some cases. The tendency during the last thirty years on the part of Whitehall functionaries has been in favour of large buildings, of a costly staff and of an extravagant outlay. Everything has been done on a scale of

vastness, regardless of expense. The fatal facilities for borrowing granted to and often forced upon local authorities have saddled the country with a debt which, added to municipal obligations, now exceeds £ 230,000,000, or nearly thrice the indebtedness of twenty years ago. Much money has gone in the erection of huge barrack schools, like those for two thousand children at Sutton, in Surrey, which are now about to be abandoned and sold. For many years a number of earnest reformers protested against the impolicy of herding together great crowds of pauper children at vast cost, to the risk of health from repeated outbreaks of ophthalmia and other virulent diseases, and with a certain result of perpetuating the pauper taint. As an alternative and preferable scheme was urged the boarding-out of the children under efficient supervision, or placing them in cottage homes under a foster mother. Red tape resisted or opposed the plan, or set up a *non possimus*. After years of struggling, leave was grudgingly conceded here and there in order to stop importunate and resolute guardians, but the leave was so hampered by conditions and restrictions as to render it almost inoperative. Meanwhile, the work of building fresh schools went on and millions must have been sunk and lost, for it will be difficult to adapt the structures to any other purpose now that their doom is sealed under the force of indignant public opinion. Of course it is too much to expect an admission of error from the Tite Barnacles, but they have tacitly abandoned the policy maintained by them for a generation in the face of remonstrance and resistance.

It is not surprising that the example set by the Whitehall authorities is emulated by some of the local bodies that have been called into existence of late years. Two glaring instances have just occurred. The London School Board, in defiance of an Act of Parliament and with the connivance, if not with something more, of the Education Department, has been persistently neglecting to make provision for hundreds of families whom it has

displaced to provide sites for schools in crowded neighbourhoods. The London County Council has just been foiled in an attempt to obtain control over the Rowton dwellings, and to treat them as common lodging houses, having been subjected to a similar and a deserved rebuff in the case of the Salvation Army shelters. To be strictly accurate, the former attempt was made by one of the committees, under the guidance of some fussy self-seeking members. The Council as a body does not seem to have been consulted before legal proceedings were taken in its name. Growing assumption of authority, vexatious interference with personal liberties, and a disregard of rights belonging to the community, to say nothing of grosser scandals, appear to be inseparable from huge administrative bodies, most of which will be found to be under the influence of a few clever wire-pullers.

The growth of the official class has been enormous during the last twenty or thirty years. Adding to the civil service, the army of post office employes, the naval and military forces, police, the collectors of imperial taxes and of local rates, and municipal, urban and rural functionaries of every description, with school board officials and teachers, nearly a million of persons have to be supported out of the rates and taxes; and the number is rapidly increasing. These officials have their own trade unions for the protection of their interests, and especially for the extortion of more pay and better and earlier pensions. Two instances may be cited of the way in which this solidarity has been displayed. About ten years ago the Metropolitan and provincial police brought their political influence to bear upon M. P's and upon candidates in order to compel the granting of better terms for retirement. The result is that after twenty-five years' service a policeman, whatever his rank, and whatever the state of his health, may demand to be allowed to retire. Common constables receive £1 a week for life, while an Inspector has as much as £ 130 or £ 140 per annum. As the

majority join the force at from 20 to 23 years of age, they are able to leave in the prime of life, and to accept other positions which often bring them in as much as their pensions, to the prejudice of those who are dependant upon their own exertions.

The other instance is that of the National Union of Elementary Teachers which, prior to the General Election of 1892, sought to exact from every candidate a pledge to support in the very first session of Parliament a bill to grant pensions to teachers—the details of the measure not then being known—and altogether apart from questions of policy and opportunity. It is highly objectionable and dangerous that any class or profession, most of all one supported out of the rates or taxes, should employ the political influence of its members as a means of extorting higher pay. The municipalising of tramways, omnibuses, gas and electric lighting, water-supply and other things will inevitably create dangers in this respect against which the most rigid safeguards will have to be provided. In the case of School Board teachers it is very reprehensible that they should convert themselves into agents at the Triennial Elections in order to secure the return of candidates supposed to be in favour of a lavish expenditure, and approving of the trade-union policy of this powerful organisation.

The whole subject of public elementary education will have to be considered ere long on the broadest lines, for it is certain that the country receives nothing like adequate value for the present outlay; yet more is constantly being demanded. Moreover, it is absurd to stretch all children upon a Procrustean bed, whatever their aptitude and capacity. By all means let those be encouraged and helped who manifest receptive powers and whose ambition it is to get on, but the great majority of children in our schools forget in a few months the miscellaneous information which has been artificially forced into them, but which they can never assimilate or turn

to any practical use. It is melancholy to reflect that the poor creatures seen daily in Cheapside and Ludgate Hill and many other places, selling articles that are for the most part useless, and the boys and lads yelling newspapers at street corners, and the multitudes who describe themselves by the vague term of "labourers", and the loafers to be met with everywhere, are types of thousands all over the country who have no legitimate occupation, and no prospect of earning a livelihood, save in a casual way that means slow starvation. But all of them are the part product of our miscalled education system which is no system. Nor has it taught the crowds on bank holidays to find true recreation and pleasure in other ways than in unlimited beer and shouting, with frightful cruelty to overladen animals. Yet faddists and cranks in Parliament and on School Boards are perpetually clamouring for larger outlay of the same ill-directed and unproductive character, just as other well-meaning but foolish people are urging that Government should do this, or that, or the other in the vain hope of bringing about a Utopia that can only result from individual industry and thrift. My voice may be as one crying in the wilderness, but it is imperative to utter a strong protest against this reckless widening of the functions of Government, and against the creation of a huge official class, both imperial and local, whose interests are naturally adverse to those of the taxpayers and rate-payers.

W. H. S. AUBREY.

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## FORT ST. GEORGE.\*

In this volume Mrs. Frank Penny, already known as the author of several popular novels, has produced a bright, pleasant and readable *resumé* of the history of the City of Madras. Starting from the foundation of the settlement in 1639-40, she traces its progress through the troublous times of the seventeenth century. Twelve chapters are devoted to the doings of that period, to the peccadilloes of the Company's servants, to the quarrels, and rivalries which long weakened the East India Company's work in Madras, and to the gradual growth of the Company's trade and influence. Streyensham Master, Elihu Yale, Job Charnock and other worthies receive their full share of attention, and a special chapter is devoted to the foundation of St. Mary's church and Vestry, with which Master was closely associated. Drawing freely on the stores of matter provided by the labours of the late Mr. Talboys Wheeler, Mrs. Penny presents an interesting picture of the life of Madras in the seventeenth century. With the opening of the eighteenth century her methods become more sketchy. Up to 1748, where Talboys Wheeler's work ends, she carries on a fairly continuous story, but from there to the end of the century her method becomes distinctly episodic. The siege of Madras by the French in 1758-59 is the *pièce de resistance*, the account of this event being borrowed from Orme. After 1790, no attempt is made at a serious narrative, and the final chapter on Fort St. George in the present day is merely a piece of descriptive writing, with friendly references to "the hard-worked Under-Secretaries, who are helping to govern an empire" and to the Black Robin on the walls who "never ventures on a song." If Mrs. Penny's observation of the Under-Secretaries is not more accurate than her knowledge of the Black Robin, too much reliance must not

be placed on her testimony to the hard-working habits of the former.

It is, indeed, a thousand pities that Mrs. Penny, when she made up her mind to devote her practised pen to a history of Fort St. George, did not determine to carry out that work of research which has been waiting to be done since Talboys Wheeler stopped his investigations nearly forty years ago. Mrs. Penny tells us in her preface that the records of Fort St. George have been the most valuable sources from which she has drawn and we, of course, implicitly believe her, but the question remains as to how much she has drawn on them, and we believe that a careful perusal of her pages will leave no doubt that the suggestion of original research is not to be taken too seriously. Her authorities have been Talboys Wheeler and Orme, and when these writers fail her, the thread of her story grows thin and snaps. Yet there is ample room for an interesting work on the century of Madras History which began in 1760. The secretariat records contain numerous papers of this period not less important than the stories of "pilots and diamonds" of "Slavery and Interlopers" with which Talboys Wheeler supplied us. There is the account of the committee which sat to investigate complaints of oppression and corruption towards the Spanish population of Manila brought against the Deputy Governor and others in 1766-67. At the present day, when the affairs of the Philippines have engaged so much attention, information as to their condition under the British East Indian Company would be of value. There is the record of the enquiry held in 1784 into the proceedings of Mr. Turing, the Agent to the Governor in Ganjam. These papers illustrate the corruption which characterised the Madras Government at that time, when the native ruler of the Ganjam district, who had been dispossessed by Mr. Turing, could allege that one of his expenses had been the giving of considerable *nuzzers* to the President of the Council, Sir Thomas Rumbold, and to the members of the Council to induce them to vote in

\* "Fort St. George, Madras" by Mrs. Frank Penny (Span Sonnenchein & Co., Price 10/6)

favour of his cowle. Mrs. Penny says of Rumbold that he was weak and unwise, but not dishonest. It would be interesting to know whether she has examined the record of Ball Kristnah's enquiry. A little later, in 1791, there is the record of an enquiry in which the Nizam charged Mr. John Holland, then acting as Governor, with having received from him sums amounting to seventeen and a half lakhs of rupees. The committee of enquiry found the charge to be fully proved, and the fact that illicit receipts of such magnitude were possible in those days, shows how hard it must have been to put down corruption. It is impossible to enumerate all the records of interest which remain in Fort St. George awaiting a competent investigator. The mutiny of the 52nd Regiment at Poonamalli, in 1785, the attempt to supply Madras in 1770-71 with improved police and Municipal administration, the cipher letters regarding Tippoo sent by the Resident in Hyderabad, the price-current of 1798, when all the native tradesmen, palanquin bearers, and coolie maistries signed an agreement to charge fixed rates for their goods or labour—these are among the subjects which Mrs. Penny would have found at hand, had she pursued her studies among the records of Fort St. George. Mrs. Penny's rôle is, however, that of the populariser of already acquired information, and not that of the student, and as she plays the former part very pleasantly, we must not complain.

As might be expected from her connection with the Fort Church, Mrs. Penny devotes a good deal of attention to the origin, history, and monuments of St. Mary's. The first sod was turned on Lady-day 1678 (hence the dedication to the Virgin) and it was opened two years later in 1680. The first chaplain was apparently the Rev. Patrick Warner about 1668; before that time the spiritual needs of the population were ministered to by two French Capuchin monks, and according to Mrs. Penny, "the little Anglican community had no difficulty in accepting the ministrations of the good

friars." The fact seems to be that "the little Anglican community" took little count of priests whether Protestant or Catholic. They allowed their children to be brought up as Papists without concern and even caused a scandal by drinking the health of the Devil. The Directors at home issued many excellent instructions, but it was a long time before manners mended and the exiled British went properly to Church. In 1711 the factors and writers were summoned before the Governor-in-Council to receive a reprimand for their non-attendance at Divine Service and were warned that, if they continued their evil ways, they would be fined and the money given to the poor. In these days of Adyar Clubs and Sunday picnics a similar treatment might be found a useful way of raising funds for the Friend-in-Need Society. Mrs. Penny generally holds a brief for John Company and is anxious to disprove the opinion, held by the historians, that the Company left the work of missionary enterprise to be begun by the Danes. It must be admitted that the evidence which she is able to produce is somewhat slender. It consists of two allusions to natives professing the Protestant religion, and of a letter sent by the Company to Surat in 1679 in which they ordered that, if 100 slaves were bought, they should be instructed in Christianity and offered their freedom after three years, if baptized. If these are the only efforts which the Company made "to promote Christianity among their Eastern dependants," the less said about them the better, for they savoured of bribery and corruption. Nor is Mrs. Penny quite justified in her representation of Ziegenbalg and Schultze, the Danish missionaries, whose names appear in Mrs. Penny's text as Ziegenbald and Schultz. She states that the former opened his school in Black Town "in conjunction with the Fort Chaplain," whereas Ziegenbalg's journal shows that his action was entirely due to his own initiative; and though Schultze had passed through London on his way to India, he cannot correctly be said to arrive at Madras as "the first Agen.

of the S. P. C. K.' The Danes did in truth commence the work of Protestant missions in Southern India and they should not be deprived of the credit of it. Even the cost of their one building was subscribed by "friends in Germany," aided by local subscriptions, and not by the S. P. C. K. or the East India Company. Until they arrived, the attempt to christianize the native populations had been carefully left to the Roman Catholics.

Mrs. Peuny might have done worse than include in her account of Madras some extracts from the memorials left by these Danish missionaries, whose claim to be pioneers of the Protestant missions she seeks to disparage. Their journals prove that their task was a hard one. They lived in the midst of the native quarter and their one house served as church, school and dwelling. When they travelled, they did so on foot, resting under trees, or in the ordinary native choultries, eating off leaf-plates, and without any of the comforts which their modern successors regard as necessities. Within a day's walk of Madras, tigers were so numerous that to travel by night was to risk one's life. "Eighteen days ago," writes Schultze, "a tiger had killed and sucked the blood of a man on this very road. Last night he strangled a large ox and a hōg." This was not very far from St. Thomas' Mount. A danger hardly less serious was that of capture by the people of the Nawob of Arcot who were wont to keep any stray white in prison till he was ransomed or died. The Roman Catholics possessed great influence in Fort St. George, and "a large and beautiful Church." "These Patres," writes the Danish missionary, "are our bitterest persecutors and calumniators, much worse so than the heathen." Toleration of alien religions was then, as now, an honourable mark of the Hindu, and it is amusing to find the Brahman of the early 18th century putting the same hard questions to his would-be-converter as his twentieth century successors delight in. The missionaries duly recorded the questions, but "for the sake of conciseness" omitted the answers.

Then, as now, the native population was for the most part wretchedly poor. In 1736 we find the Rental-General, the Collector of the day, reporting that "a very great number of persons taxed in the Rent Roll at four and six fanams each . . . cannot get more than thirty or thirty-five cash per day." Thirty cash was equal to about half an anna, though its purchasing power must have been greater. Even at the beginning of the 18th century, with a population of small extent compared with that of the modern times, famines were severe. One occurred in Madras in 1733-34 and there was much distress. "The starving people," writes Schultze, "snatch food out of the hands of persons in the street. Many drop down dead in the road. It is piteous to see them crawling about like so many withered sticks. Their bones can be counted—their skins are shrivelled and many have not strength enough left to ask an alms, many hundreds have sold their children, even infants at the breast, and for three or four fanams." If this was the case within the walls of Madras, the state of affairs in the inland districts must often have been worse. It does not appear that the East India Company recognised, as yet, any obligation to relieve the starving native of the country, but the famine was sufficiently bad to injure trade, and in consequence it was duly reported by the Government of Fort St. George to the Court of Directors. It was caused, according to Governor Pitt and his Council, by the neglect of the Muhammadan rulers of the country to keep in repair the irrigation works constructed by their Hindu predecessors. This had thrown large areas out of cultivation while the increased taxation of the Nawabs and Viceroy, owing an easy allegiance to the Court at Delhi, had impoverished the cultivators of the remaining lands. Paddy, says the Government Letter of 1733, is now selling for forty pagodas (Rs. 140) the garce, whereas twenty-five pagodas (Rs. 96½) was formerly considered a famine price. In a

native petition of about the same date (1736) it is alleged that a garce of paddy had been used to sell "for five or six pagodas or thereabouts," that is for from seventeen to twenty-one rupees. The fall in the purchasing power of money which has occurred during the last two centuries will be clear from the fact that at the present day paddy, when prices are high, fetches eighty pagodas a garce or Rs. 280. Mrs. Penny's work is not closely concerned with the state of the native population, but some further information regarding it would not have been out of place in her book.

The siege of Madras by the French in 1758-59 occupies, as already noted, a prominent place in Mrs. Penny's account of the second part of the 18th century. It was, indeed, the most remarkable incident in the history of the town at that period, and Mrs. Penny's reproduction of Orme's story is generally accurate. She errs, however, in attempting to make out that the attack found the English unprepared. She describes Governor Pigot as "digging the moat and pushing on night and day to get the fortifications into something like servicable order" and she states that "the fortifications on the north side of the Fort were incomplete on the arrival of the French." The reader receives an impression that the defence of the town was improvised like that of Kimberley or Mafeking. The fact is that the English were hard at work on the fortifications for a period of three years before the French arrived. The moat or ditch had been dug fifteen years before, and the earthwork of 1756 involved the filling up of the old river-bed and the diversion of the river to a new course outside the new line of defences. Orme expressly says that little was wanting to complete the defences on the land side (to the north apparently) except mines. It is interesting to note that during a siege of about two months just one-third of the total European force, 572 out of 1758, were killed, wounded, taken prisoners or died, while out of 2220 Sepoys the casualties were only 346. It is also noteworthy that during the

siege 440 Sepoys or 20 per cent. of the entire force deserted, the number of European deserters being twenty. These figures show that in 1759, two years after the battle of Plassey, there was much need of stiffening up the *morale* of the Sepoy, and it is open to question whether an impartial student of Orme will find the record wholly favourable to the Coast army. Leaving the history of the siege of Madras, Mrs. Penny notices the disgraceful conspiracy which put an end to the second governorship of Lord Pigot, the visit of Lord Cornwallis, and the rule of Sir Thomas Munro. Of the latter she quotes a letter (date wrongly quoted as 1788) in which Munro gives his sister a humorous account of the penury of his position. He declares that he was three years in India before he possessed a pillow, that he had never been able to have a coat and waistcoat of the same material, and that his only conveyance was an old horse, so weak that Munro had to walk two-thirds of his journeys. Mrs. Penny quotes this letter to show how Munro had to rough it up-country, but readers of Munro's correspondence know that the great man added to his other qualities a very pretty talent for exaggeration. Especially, he seems to have enjoyed drawing the long bow in his letters to his relatives in Scotland. In 1800 we find him telling his sister that cows in India are so small and so dry that the milk of fifty of them will hardly make butter for one man. "Every farmer puts what milk his cows yield into a pot or bottle and by shaking it for half an hour, he gets as much butter as you can lift with the point of a knife." The story about his not having been able to afford himself a pillow after years of service, in this land where the cotton plant has even given a name to the soil, may, like the story about the atom of butter, be taken with a grain of salt.

The last pages of Mrs. Penny's history of Fort St. George are occupied by a list of the monuments in St. Mary's Church and cemetery, supplemented by extracts drawn from the Parish

registers. The old cemetery of St. Mary's lay outside the Fort on the site where the High Court now stands. It was the custom of our predecessors to give evidence of the strength of their affection for the departed by the bulk of the monuments they erected over them, and, as might be expected under such a system, large tombs proved the rule. When the French under Lally laid siege to Madras in 1758, they took possession of the cemetery and used the monuments as a cover for their attack. On their departure it was decided to level the tombs and to remove the memorial slabs into the Fort, where many of them still remain. Mrs. Penny gives a list of these monuments, with notes from the registers regarding some of the names, and with illustrations of some of the armorial bearings. This is followed by an alphabetical list of the monuments in the later cemetery attached to St. Mary's Church, and by a briefer list of persons buried, or commemorated by monuments, in the church. The publication of these lists should prove a useful contribution to Anglo-Indian biography, but it is probable that a good deal more might have been made out of the Parish registers, in which entries occur of Caleb Clarke, the grandson of Milton, and of the two brothers, Galstone and Lancelot, of Joseph Addison. The investigation of these remains, and their collocation with the evidence from the monuments, would furnish material for a special volume. Perhaps Mrs. Penny will give us this some day. In the meanwhile the public will be grateful to her for what she has already done. Her pleasant volume will attract many who would never have opened Talboys Wheeler's more elaborate series of extracts, and when another edition is called for, opportunity should be taken to correct the somewhat numerous errors in dates, names and other *minutiae* which detract from the merit of the present work.

A. G. CARDEW.

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### THE PROGRESS OF OPHTHALMOLOGY IN THE VICTORIAN ERA.

All diseases quenched by science, no man halt,  
[or deaf or blind ;  
Stronger ever born of weaker, lustier body, larger  
[mind.  
*Tennyson.*

HERE are surely few triumphs of the Victorian era, which take a prouder place than those won by the Art of Healing, and one can say without fear of contradiction that ophthalmology, the branch of this art which deals with the human eye, has borne fruit which will compare favourably with the efforts of any of the sister sciences.

It would be far beyond the scope of the present article to review, in anything like detail, the progress of ophthalmic medicine during the last sixty-four years, but a few of its most striking achievements may, in the recitation, serve to show us something of the debt we owe, a debt too often forgotten, to those faithful subjects of the lady we mourn, who, forsaking paths of life which meet a readier recognition, have devoted their lives to 'reducing the sum of human misery.'

It is strange how imperceptibly some of the greatest blessings of modern civilisation have crept into our lives, so imperceptibly indeed that we are not conscious of the depth of our dependence on them till they are lost to us by some unforeseen calamity. Very few, probably, have ever given a thought to the vast influence on human progress which has been exercised by the correction of errors of refraction, in other words, by the adaptation of suitable spectacles to those who need them. Modern life has made demands on man's eye which, we may safely say, it could never have met unaided, for, admirably as this organ is adapted for the uses to which man in a primitive state puts it, it is in many instances utterly unable to cope single-handed with the stress and strain of modern civilisation. Pause for a moment and think of the imperious demands of modern life! What lucrative occupa-



tion is there open to the present generation which does not require close and continued application of the visual organs? The student, the mechanic, the professional man, the merchant and each other, who would endeavour to distance his compeers or even to hold his own, must nowadays do so by means of a careful and unremitting study of his own particular branch of wage-earning.

This has necessarily involved a strain on the eye which it was never, if we may hazard a guess at the great ground-plan, intended to bear, which, in any case, we can safely say, it cannot bear alone. To put the matter tersely, the human eye though an admirable organ for the needs of the savage, must in a large percentage of cases break down miserably under the stress of civilisation, for it is primarily adapted for distant work, whereas civilisation demands that it shall devote itself to the study of things very near at hand, and not of distant objects.

Had the ophthalmologist not stepped in to aid the eye at this critical juncture, we cannot doubt but that the world's eye-sight would have been in the very gravest peril. That this is no exaggeration has been clearly shown by the experience of Germany, of America and of other countries.

Snowball-like, the evil would probably have continued to grow till the progress of civilisation would have been severely hampered. If you doubt this, try and picture to yourself the influence on the world's history of leaving out of count the vast body of magnificent men who have sought aid from the optician; deprived of such aid they would in very many cases have fallen out of the great struggle, or would at the best have only taken a very second-rate place therein. It may be argued that great men will rise above the limitations which tie their smaller brethren down, but those who have felt the wearisome headache, the ever-recurring confusions of the letters they are striving to decipher, and the other painful symptoms of eye-strain will agree that, but for correction of refractive errors, the world would have lost some of her earth-

ly-best, and science and art would have been the poorer thereby. All honour, then, to the men, who have, during the past 60 years, devoted untiring energy and magnificent ability to the task of perfecting a branch of science, which many well-educated people hardly realise to be a science at all.

Honour to Jaeger of Vienna, and Snellen of Holland who in the last half of the newly dead century placed the testing of errors of refraction on a sound basis, a basis from which progress could be made, by means of the test types which bear their names and which are in universal use amongst eye-surgeons! Honour too, to Couper of London, to Forbes and Channley, also of that great city, who by substituting an objective for a subjective test, added greatly to the bounds of usefulness of the optician! Nor would we forget the many other names, too numerous to mention, of men of all nations who have each contributed their quota to make the correction of errors of refraction an exact science, and whose work has all been done during the last three decades of the nineteenth century.

Very gratefully we recall the memories of the gallant men who in 1815 stood between Europe and a selfish tyrant, while, with hero-worship, we acclaim the victor of Trafalgar, yet what place do we find in history for the men, almost unknown outside medical circles, who have stood between the world and the loss of a large fraction of the world's eyesight? What indeed?

The subject is too big; we must leave it; many have been the triumphs of the proud Victorian era, and very low is the world's estimate of the work we have been reviewing; it is estimated in the lowest of all coin—dirty money—and yet who can say? Another generation may appraise things more justly, and the life-giving labours of science may one day be valued as highly as the blood-defiled fruits of the sword; we must pass on to another field.

It is hard to realise that whilst the latest textbook of diseases of the eye runs into about 2000 •

Closely written pages and is replete with beautiful pictures of the appearances presented by the interior of the eye in health and disease, our forbears just half a century ago had never looked into the depths of a human eye, and had not the vaguest idea that it was possible by means of so doing to ascertain the existence, the nature, the extent and the probable courses of many diseases of the organ, and yet this is but the naked truth. It was while undertaking a number of experiments, whose object was to ascertain the source of the luminosity of the human eye in the darkness, that Helmholtz made the startling discovery which gave to the world the ophthalmoscope by means of which he did not doubt that all the pathologic changes so far only observed in the cadaver, can be seen in the living eye; a fact which promises great progress in the little known pathology of this organ."

This little instrument consisted of a mirror by means of which light was cast into the eye through its pupil, while a small hole in the centre of the mirror allowed the observer to look through, and to clearly see the various structures of the back of the eye, thus opening up a region to observation, which had hitherto been a veritable *terra incognita*.

Fifty years of the Victorian era have more than justified the promises thus made. To-day the ophthalmologist treats diseases of the eye with the intelligence born of exact knowledge, while half a century ago he deserved the quaint allegory which likened the medical man to one who came on the field to find his friend in deadly grip with an enemy, and who dashing wildly in, stick in hand, sometimes struck shrewd blows at the enemy (disease), but almost as often smote his unfortunate friend (the patient).

Following in Helmholtz's footsteps many a man has since lived and toiled and died, leaving behind him a life-record of which he might well be proud, and yet dying has felt himself but an ignorant man, so vast is the field of labour into which the ophthalmologist has entered as the result of this great invention. All honour to Helmholtz,

Physician, Mathematician, Scientist; and honour to those whose toil has expanded the rift he opened till it has let in on mankind an ocean of blessing, that was undreamt of when Victoria the Good, had sat twice seven years on the throne of Great Britain.

The full story of what the ophthalmoscope has done for man has not been told when we have considered and discussed the diseases of the eye and their treatment, for this little instrument has made the science of ophthalmology the hand-maid of the larger sciences of medicine and surgery.

By examining the illuminated back of the eye, the surgeon or physician can detect at an early stage the evidence of diseases in far distant and important organs such as the kidney and the brain. Thus may he gain important hints in diagnosis and valuable suggestion for treatment.

Lastly, but far from least, we come to the advances on the surgical side of ophthalmology. Another writer in the *Indian Review* is to tell the story of the progress of surgery during the reign, whose close we sadly mourn, and it would ill become me to trespass on his province by dealing with this subject at length, but one may be permitted to say one or two words on the influence that Lord Lister has exercised on the surgery of the eye in common with that of every other branch of surgery. To-day, as an outcome of Listerian teaching of antiseptics and asepsis, the surgeon can with confidence recommend an operation to his patient which a few short years ago he would have suggested with the diffidence that must always have accompanied the gravest uncertainty which then existed as to the course events would pursue. It would take us too far afield and would make the subject far too technical, were we to attempt to describe the large number of eye operations which Lord Lister's work has brought within our reach. This wide opening up of surgical possibilities has meant to suffering humanity a vast rolling sea of ease, of happiness and of restored powers. It may, however, give some just idea of

what Listerism has meant if we compare the results of operations for cataract before Lister's time and now. Formerly of every 100 eyes subjected to operation for cataract a very large percentage were completely lost as a result of inflammation; to-day no surgeon thinks he has done well unless he can restore sight to from 92-94 % of those eyes he submits to an operation for the extraction of cataract. Think of the difference between the percentage of the old figures and the new, multiply it by the many many thousands of such hundreds of operations done, and try to estimate in any measure you can the amount of happiness and of restored power it has meant.

While on this subject one must not omit to say a word on the influence that general and local anaesthetics have exerted on the progress of the surgery of the eye during this period. It seems fitting and right that the gentle lady whose care for the sick, the suffering and the dying bound her to her people with cords of love that will never be broken, should have looked in the earlier years of her glorious reign on the discovery in chloroform of a medicine which has brought more relief from suffering than any other invention of the age, and that her later years should have seen the widespread introduction of cocaine and a vast number of allied local anesthetics which have made difficult and painful operations, easy and painless, and which have lessened, in no small measure, the world's great burden of sorrow and suffering.

R. H. ELLIOTT.

### MALABAR AND ITS FOLK.

A SYSTEMATIC DESCRIPTION OF SOCIAL  
CUSTOMS AND INSTITUTIONS OF MALABAR.

BY

T. K. GOPAL PANIKKAR, B. A.

WITH AN INTRODUCTION BY

Rev. F. W. KELLETT, M. A. F. M. U.

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### THE DATE OF THE MAHABHARATA WAR.

In the last paper it was attempted to fix the date of the beginning of the Kaliyuga from testimony derived from four different sources.

From the data furnished by the astronomical work called Vedanga Jyotisha, it was inferred that the era must have begun about 1173 B. C. From the statement made by the astronomer Gargacharya, we drew the conclusion that it must have commenced a few years before 1165 B. C. On examining the figures given by the classical historians, we found that it began 851 years before the date of Alexander's stay in India, or in 1177—76 B. C., a date which, we saw, was confirmed by the evidence of the Malabar Kollam Andu which commenced in August or September, 1176 B. C. As the Vedanga Jyotisha, which refers to the period of the commencement of the Kaliyuga, begins the year with the winter solstice,\* we may well suppose that the Kaliyuga began with the winter solstice immediately preceding the commencement of the Kollam Andu, or at the end of 1177 B. C. It is proposed in this paper to examine fresh materials and to fix the date of the great Mahabharata war which was fought a few years before the beginning of the Kaliyuga.

It is unanimously declared in the Mahabharata† and in all the Puranas ‡ that as long as Sri Krishna remained on earth, the Dwaparayuga continued and with his death commenced the Kali age. "As long as the earth was touched by His holy feet, the Kali age could not affect it. \*\* But the day that Krishna shall have departed from the earth will be the first of the Kaliyuga."§ On hearing of his death, his devoted admirers, the Pandavas, did not care any longer to hold the reins of government, which indeed they would have already resigned, but that their grandson and heir, Parikshit, had until then been too young to be trusted with the cares of an empire. The sweets of the purple had, in fact, never been acceptable to them inasmuch as their victory was bought at too dear a price and only after a terrific carnage of all their dearest friends and relatives in that tremendous War. The death of

\* Yajur Vedanga Jyotisha: Verses 6 and 7.

† Mahaprasthanika parva I, 2 and 7.

‡ Vishnu Purana IV 24. Wilson's translation of Vishnu Purana Vol. IV. p. 234.

§ *Ibid.*

|| Sec. Santi Parvas. VII, XXV, and LXXV.

Sri Krishna proved to be the proverbial last straw and the Pandavas once for all determined to quit a world fraught with so many painful recollections. There is a pathetic story current in Southern India that when Yudhishtira was ruling his empire with even-handed justice, he suddenly found on a certain day an unjust claim set up before him by a litigant who, only the day before, had been pleading the cause of righteousness. The virtuous monarch was astounded by this unprecedented and sudden decline in virtue and attributed it to the influence of the Kaliyuga, the dawn of which was then being expected. He forthwith resolved never more to witness the vices of the sinful age and, having established Parikshit in the sovereignty of his realm, departed with his brothers on his grand Mahaprasthan. Whatever may be the reason that ultimately induced the Pandavas to retire from their worldly duties, it is evident that they were enabled to carry out their resolve the more easily by the fact that Parikshit had just then arrived at age. It has to be remembered that in precocious India Hindu lawyers fix the age of majority in the sixteenth year. As Parikshit was born soon after the close of the war, the beginning of the Kali age, which is coeval with the coronation\* of Parikshit, must be placed about sixteen years after the war; and if the Kali commenced in 1177 B. C., Parikshit must probably have been born in 1193 B. C. and the War should have taken place towards the end of the year 1194 B. C.

But the epic relates that the race of Sri Krishna was destroyed 36† years after the war and that the Pandavas left their kingdom soon after at the beginning of the Kaliyuga. The compiler of the epic, who wants us here to believe that the Kali commenced 36 years after the war, on another occasion‡ places the beginning of the Kali at the time of the war itself. It is not safe to rely on every statement contained in the epic, because it is neither the work of one author nor of one age.§ We can find other statements in the epic nearly contradicting the statements above set forth. The Mahabharata states that after the expiry of fifteen years after the war, old Dhritrashtra left with his wife and Kunti for the forest glades

to enable him to lead the holy life of a recluse. In the sixteenth year after the war, the Pandavas are said to have set out on a visit to these old people, taking with them all their male and female relatives. We are told that Uttara, the wife of Abhimanyu, "who had recently become a mother,"\* was also among the number, "with her child (Parikshit) in her lap."† It must be borne in mind that Parikshit was conceived sometime before the war, as he was the son of Abhimanyu who had lost his life in the war. The Mahabharata expressly states that Parikshit was *in gremio matris* during the progress of the war.‡ Consequently he could not have been a baby at the breasts in the sixteenth year after the war. As this statement is therefore incorrect, I am disposed to believe that in the sixteenth year after the war the Pandavas started, not on a visit to these old people, but on their last journey, the Mahaprasthan. Moreover, one may be struck by the fact that while much irrelevant and extraneous matter is crowded into the epic, the marriage of Parikshit alone is not mentioned. The reason evidently is that Parikshit was young and unmarried when the Pandavas rather suddenly handed over the kingdom to him on hearing of the death of that great hero-philosopher, that *alter ego* of Paudava Arjuna, Sri Krishna Vasudeva. The Mahabharata concludes with the narration of their last journey and ascent to heaven, and most probably the marriage of Parikshit took place sometime later. Besides, if Parikshit were really 36 years of age at this time, how is it that Yudhishtira placed him at the time of their departure under the tutelage of Kripacharya?§ It would be more consistent with the general drift of the epic if we hold that Parikshit was about sixteen years of age when he was placed in charge of the Kaurava Empire and that the Mahabharata war occurred about sixteen years before the beginning of the Kaliyuga. We shall presently find that there are other grounds which go to support such a conclusion.

The only indigenous work in all India that can pass for history is the Rajatarangini, the well-known history of Kashmir, written in 1148 A. D. by Kalhana Pandit. It states|| that the author put together the details deduced from his examination, not only of the *sasanas* of the previous kings recording the consecration of temples and grants to them, but also of the laudatory inscriptions and of *sastras* current in his time. Dr. Hultzsch and M. Troyer

\* Wilson's Vishnu Purana, Vol. IV. p. 232.

† Mausala Parva, I. 1 and 3.

‡ Bhagavatya Parva, Sec. CXLII.

§ Telang's Introductions to Bhagavat Gita, Sanatsujatiya, and Anugita in the Sacred Books of the East Series, Vol. VIII; Wilson's Introduction to Vishnu Purana; Prof. Macdonell's Sanskrit Literature, p. 285. Weber's Indian Literature, pp. 187 and 188; Monier Williams's Indian Wisdom, XIII. p. 371.

\* Asramavasika Parva, XV. 10.

† Ibid. XXV. 15.

‡ Sautika Parva, XVI. 7 and 8.

§ Mausala Parva, VII. 14.

|| First Taranga, Verse 15.

translate thus the verses 48 and 49 of the first Taranga:—‘Misled by the tradition that the Bharata war took place at the end of the Dwapara (yuga), some have considered as wrong the sum of years (contained in the statement that,) in the Kaliyuga, the kings beginning with Gonanda I. (and ending with Andha Yudhishtira) ruled over the Kasmiras for 2268 years.\* This Gonanda I. was, according to the Rajatarangini,† the contemporary of the great Pandavas of the Mahabharata fame. The fifty-second in descent from Gonanda I. was Abhimanyu, the son of Kanishka, whose successor, Gonanda III., was the first of a new dynasty ‘which came to power 2330 years before Kalhana’s time.‡ But as we find in the Rajatarangini that the actuals for the reigns from the end of the reign of Andha Yudhishtira, the last of the dynasty of Gonanda III., to Kalhana’s own time amount to 1329 years, 3 months and 28 days, or roughly 1330 years, Kalhana must have supposed that the interval between the end of Abhimanyu’s reign and that of Andha Yudhishtira’s represented a period of (2330—1330, or) 1000 years. From the extract given above, it is clear that in Kalhana’s time the belief was current that there had elapsed 2268 years from the time of Pandava Yudhishtira to that of Andha Yudhishtira. Consequently Kalhana gives (2268—1000, or) 1268 years for the reigns of the first fifty-two kings from Gonanda I. to Abhimanyu. We are now in a position to understand what the ‘tradition’§ referred to by Kalhana, actually was. It must have been supposed that 1268 years had elapsed from the time of the coronation of Pandava Yudhishtira, the contemporary of Gonanda I., to the time of Abhimanyu, and that the twenty-one kings of the dynasty of Gonanda III. reigned in all for one thousand years. We may go even further and infer that the original tradition was to the effect that 1268 years had elapsed from the time of the great War to the time of Kanishka’s successor, and that the period of 1000 years, allotted to the twenty-one kings of the second dynasty, is a later addition, regard being had to the large average for each reign and the roundness of the figure. As a matter of fact, Kalhana himself actually states that it is “thought” that the fifty-two kings down to Abhimanyu reigned in all “for 1266 || years.”

But we may well be surprised with the actual dates given by the historian. As we may infer from the verses 48 and 49 of the first Taranga, he accepts the old tradition in so far as it stated that 2268 years had elapsed from the time of Pandava Yudhishtira to that of Andha Yudhishtira; but

with regard to the other part of the tradition, namely, that Pandava Yudhishtira lived at the end of the Dwapara Yuga, Kalhana does not accept it. The reason for Kalhana’s standpoint was that, in his day as now, the Dwapara was supposed to have ended, and the Kaliyuga to have begun, in 3102 B. C., whereas he placed greater reliance on a verse \* of Garga, quoted in Varahamihira’s Brihat Samhita, which he interpreted, erroneously as will shortly appear, as meaning that Yudhishtira commenced to reign 2526 years before the era of Salivahana, or in 2448 B. C. As Abhimanyu lived 1268 years after Pandava Yudhishtira, Kalhana therefore placed him in (2448—1268, or) 1180 B. C. Since Kanishka and his successor Abhimanyu lived in the first century after Christ, it will be readily seen that the false figures given by Kalhana for Abhimanyu and all the subsequent kings down to the sixth century A. D. can be traced to his mistaken interpretation of the tradition and of the verse of Garga referred to by him.

The verse of Garga will be shortly discussed in another connection. But at present it is enough to concern ourselves with Kalhana’s premises, and not with his dates. As we have seen, he proceeded on an ancient tradition that from the time of Yudhishtira to the time of Abhimanyu, the successor of Kanishka, there was an interval of 1268 years. Though the late General Cunningham thought that the Vikrama era dating from 57 B.C. began with Kanishka, yet almost all Sanskrit† scholars are now agreed that he lived in the first century after Christ and that probably the Saka era, which began on the 3rd of March 78 A. D., dates from this influential monarch. Without, however, entering into this vexed question, we may broadly state that Kanishka is proved by coins‡ to have reigned down to 40 A. D. Whether or not the era of Salivahana dates from Kanishka, it is clear that Abhimanyu must have been reigning about the commencement of that era in 78 A. D. If so, Yudhishtira, who lived 1268 years earlier, must have begun to reign about (1268—78, or) 1190 B.C. As the§ coronation of Yudhishtira took place soon after the close of the war, we may suppose that the Mahabharata war also was fought about the year 1190 B.C.

In the year 476 A. D. was born the greatest of Hindu astronomers, Aryabhata by name, whose

\* Brihat Samhita, XIII, 3 and 4,

† See M. Duff’s Chronology of India, p. 21, where all the authorities are collected.

‡ Lassen in Indische Alterthumskunde, II, 413, quoted in Weber’s Indian Literature, p. 218 and 219.

§ Santi Parva, XLI, 23.

\* Indian Antiquary, April 1889,

† I. 44, ‡ I. 52 and 53.

§ I. 48 and 49.

|| Evidently a mistake for 1268 years. I. 54.

fame spread not only in India and Arabia but also in the vast dominions of the Greek Empire of Constantinople. He was known to the Arabs under the name of Arjabahr and to the Romans as Andubarius or Ardubarius.\* He was the first in India to promulgate the bold theory that it was the earth that revolved round the sun. His calculation of the circumference of the earth and his explanation of the phenomena of the eclipses† prove beyond doubt that he richly deserved all the encomiums showered upon him by Hindus and foreigners alike. He is reported to have stated‡ “that the line of the Saptarshis intersected the middle of Magha Nakshatra in the year of Kaliyuga 1910,” i.e., 1192 B.C. It has already been shown that the Puranas § relate that the Rishis were in the very same position at the birth of Parikshit. Combining the testimony of the Puranas with that of Aryabhata, we may readily infer that Parikshit was born about 1192 B.C. As the War took place at the most a few months earlier than the birth of Parikshit, it might have occurred about 1193 B.C.

We arrive at the very same result if we take into consideration the number of kings who, according to the Puranas, occupied the throne of Magadha from the time of the war to the accession of Chandragupta. The Vishnu Purana states what the other Puranas mainly agree in recording, namely, that the nine Nandas reigned for a hundred years, that the ten Saisunagas of the next previous dynasty reigned for 362 years, that the five kings of the still previous Pradyota dynasty occupied the throne for 138 years, and that this last dynasty succeeded the famous Barhadratha dynasty, twenty-two kings of which occupied the throne of Magadha since the date of the War. Thus we get 100 years for the Nandas and 500 years for the two previous dynasties. We have to bear in mind that it is unsafe to implicitly believe in everything that the Puranas relate. It is rather our duty to “prove all things and hold fast that which is good.” The number of kings given by them is probably correct inasmuch as it is very probable that the same number was reported to the Greek Ambassador Megasthenes. But we have to pause before accepting the *periods*. At first sight one would remark the round figures for the periods allotted to these dynasties, namely, 100 years for the Nandas and 500 years for the Pradyotas and Saisunagas. What, however, strikes one most is the large average

number of years for each reign. The very same Vishnu Purana gives 137 years for the ten kings of the later Maurya dynasty, 112 years for the ten kings of the Sunga dynasty, and 45 years for the four kings of the Kanva line. The average number of years for each king of these post-Chandragupta dynasties is about 12 years. But the average for the Pradyota dynasty is about 28 years and that for the Saisunaga about 36 years! As for the Nandas, it is scarcely probable that a father and his sons could have reigned for one hundred years, especially when we remember that the last surviving sons did not die a natural death, but were extirpated by Chandragupta with the aid of the scheming Chanakya.\* As the years given by the Purana for these pre-Chandragupta dynasties are therefore not trustworthy, it would be unsafe to deduce therefrom the probable date of the war. It is possible that the Puranas may have left out insignificant reigns, or that these ancient kings were more robust and long-lived than the kings of the post-Chandragupta period; but even on that supposition, the averages are still too large.

In hardy old England, from the Norman invasion to the beginning of the twentieth century, thirty-five monarchs had reigned, the commonwealth counting as one king, for a period of 835 years, and the average for each reign is about twenty-three years. From the accession of Hugh Capet of the House of Valois to the execution of Louis XVI, France † had been ruled over by thirty-three kings for a period of (1793–987, or) 806 years, yielding an average of about twenty-four years. Eight kings had ruled over Prussia ‡ from the accession of Frederick I. to the death of Frederick II. in 1888 A. D., or for a period of 187 years with an average of about twenty-three years. In Russia, † from the time of Ivan III., there had reigned twenty-two monarchs up to the accession of the present Emperor Nicholas II. for a period of (1894–1462, or) 432 years, which results in an average of about nineteen years. In old Japan, the present Emperor Mutsu Hito is supposed to be “the 123rd of the Imperial line, his ancestor Jimmu Tenno, the first Emperor, having established the dynasty which has lasted unbroken for 2500 years.”‡ This gives about twenty-one years for each king of this long-lived dynasty. Thus we have the averages for each of the five foremost Powers of our Hemisphere, 23 years for England, 24 for France, 23 for Germany,

\* ‘Chronicon Paschale,’ quoted in Weber’s Indian Literature p. 255.

† Dutt’s Ancient India, Vol. II. p. 243.

‡ Warren’s Kala Sankalita, p. 380.

§ See Wilson’s Translation of Vishnu Purana, Vol IV, p. 83.

\* See Visakhadatta’s Mudra-Rakshasa and Dhundiraja’s introduction thereto. Mahavanoo, Ch. IV.

† George’s Genealogical Tables of Modern History.

‡ Rev. Herbert Moore’s Half-hours in Japan, p. 250.

19 for Russia, and 21 for Japan. We may not be far wrong if we take the average of these averages, i.e. about 22 years, as the probable duration of each reign of the pre-Chandragupta dynasties. There were twenty-two Barhadhrathas, five Pradyotas and ten Saisunagas, or thirty-seven kings in all, from the time of the War to that of the Nandas and they might therefore have reigned for about  $(37 \times 22, \text{ or } 814 \text{ years})$ . Moreover, according to the Buddhistic 'Mahawanso,' composed by Mahanama at about 460 A. D., Mahapadma Nanda, called Kalasoko in the chronicle, reigned for twenty years and "had ten sons. These brothers conjointly ruled the empire righteously for 22 years. Subsequently there were nine brothers: they also according to seniority righteously reigned for 22 years."\* That is to say, the Nandas reigned in all for a period of  $(20 + 22 + 22, \text{ or } 64 \text{ years})$ , a figure more likely to be correct than the Puranic 100 years. Thus, according to our method of reckoning, the War must have happened about  $(814 + 64, \text{ or } 878 \text{ years})$  before Chandragupta, or at about  $(878 + 315 \dagger, \text{ or } 1193 \text{ B. C.})$

We have stated above that there was an interval of about 814 years between the War and accession to the throne of Mahapadma Nanda. But the Vishnu Purana gives 1015‡ years for the period, or about 200 years more than our figure. The compiler of the Purana appears to have arrived at 1015 years by supposing that a round period of 1000 years elapsed from the commencement of the Kaliyuga to the time of Nanda's accession and that the Kali began 15 years later than the war. If this surmise of ours be correct, we may well suspect the genuineness of the interval of a round period of a thousand years between the beginning of Kali and the coronation of Nanda. Moreover, the Purana period of 1015 years for the 37 kings between the War and the coronation of Nanda yields an improbable average of a little over 27 years. That the author deals vaguely in round figures is evident from his giving 100 years for the Nandas, 500 years for the Pradyotas and Saisunagas, and 1000 § years for the Barhadhratha dynasty; and this last figure directly conflicts with the other statement that 1015 years intervened between the war and the end of the Saisunaga dynasty.

There is another statement in this Purana to the effect that the Saptarshis, which are supposed to move at the rate of one Nakshatra for every hundred years,|| had moved ten Nakshatras from Magha to

Purvashada during this interval, which therefore comes to  $(10 \times 100, \text{ or } 1000 \text{ years})$ . It will be apparent that this supposed movement was arrived at by the author, not by its having been previously actually observed and noted, for such a movement is astronomically impossible, but by his deducing it from his other statement, contained in the immediately preceding verse, that 1015 years had elapsed during this interval. In fact the author seems first to have had in mind that the Kali began 15 years after the war and that 1000 years elapsed from the beginning of the Kali era to the accession of Nanda to the throne of Magadha, and next to have deduced therefrom the proposition that the Saptarshis, which were in Magha at the time of the war, had moved on to Purvashada at the coronation of Mahapadma Nanda.

In chapter XIII of the Brihat Samhita, Varahamihira, who was born in 505 A. D., deals with the subject of the Saptarshi cycles. After premising that he quotes from Vriddha Garga, he states:—

आसन्मघासु मुनयः शसति पृथ्वी युधिष्ठिरे वृषती ।

षड्विक्रपञ्चद्वियुतः शककालस्तस्य राजश्च ॥ ३ ॥

This sloka has been thus translated by Dr. Hultzsch \*:— "When king Yudhishtira ruled the earth, the (seven) seers (Ursa Major) were in Magha; the Saka era (is) 2526 (years after the commencement) of his reign." He comments on it by saying: "Accordingly the coronation of Yudhishtira took place 2526 years before the commencement of the Saka era, or at the expiration of the Kaliyuga-Samvat 653 and in B. C. 2448." It may be observed that Dr. Hultzsch agrees with Kalhana in † thinking that the Yudhishtira era is different from the Kali era. On the other hand, Jyotirvidabharana, an astronomical work ascribed to Kalidasa, but which scholars place in the sixteenth century ‡ A. D., tells us that in the Kaliyuga six different eras will flourish one after another; the Yudhishtira to last for 3044 years from the beginning of Kali, the Vikrama era to last for 135 years afterwards, the Salivahana for 18000 years after the Vikrama era, and the Vijaya, Nagarjuna, and Bali eras to be current in the rest of the Kaliyuga. Of course these three last eras are fictitious and have nothing to do with our enquiry. But I quote the Jyotirvidabharana only for the purpose of showing that Hindus have all along thought that the Yudhishtira era commenced with the Kali. So also Aryabhata computes by the era of Yudhishtira

\* Turnour's Mahawanso, Ch. IV.

† Max Muller's Ancient Sanskrit Literature, p. 298.

‡ Vishnu Purana, IV. 24.

§ Vishnu Purana, IV. 23.

|| Vishnu Purana, IV. 24.

\* Indian Antiquary, VIII, p. 66.

† Rajatarangini, I. 56.

‡ Weber's Indian Literature, p. 201

tira,\* which corresponds to the Kaliyuga. It is not therefore possible to concur with Kalhana and Dr. Hultzsch who place the beginning of the Yudhishtira era "at the expiration of the Kaliyuga-samvat 653 and in B. C. 2448."

We have to consider what the word 'Sakakala' really means. It has been already proved that Garga, the author of the sloka, lived about 165 B. C. Even granting, for the sake of argument, the contention of Dr. Kern that Garga lived in the first century B. C., it is not possible that Garga could have meant by 'Sakakala' either the Vikramasamvat, which began rather subsequently in 57 B. C., or the Salivahana Sakabda, which commenced still later in 78 A. D. It may also be noted here that it has not been as yet proved that the Vikramasamvat era had been in use ever since 57 B. C. On the contrary, scholars like Fergusson,† Maxmuller‡ and Weber§ are of a different opinion. Besides the Kali or the Saptarshi era, there was in the days of Garga only one other prominent era in existence, namely, the era of Nirvana, "which," says Fergusson|| in connection with a different subject, "as far as I can see was the only one that had existed previously in India." The era of Mahavira, the founder of Jainism, beginning in 527 B. C., might have been then in existence; but the Jain religion was only confined comparatively to a few and its era was not much in evidence before the public. The era of Buddha's Nirvana was, on the other hand, very widely known both by reason of the intrinsic merits of His beautiful creed and of its constitution as the State Religion, during the time of Asoka the Great. In a Tibetan work a schism ¶ is recorded as having occurred under a 'Thera Nagasena' 137 years after the Nirvana; Chandragupta is recorded to have ascended the throne 162 years\*\* after the Nirvana; the inauguration of Asoka is stated to have taken place 218 years\*\* after the Nirvana; and the Dipawanso, a history of Ceylon written in Pali verse about the fourth century A. D., makes use of the era of Nirvana in its computations. Therefore the era of Buddha's Nirvana,

which was in current use in the time of Garga might have been probably referred to by him.

It is well-known that Gautama Buddha was known by the name of Sakya Muni and that his paternal grandfather was also known by the name of Sakya. Every reader of that noble classic, Sir Edwin Arnold's *Light of Asia*, is aware that the race to which Gautama belonged was often called by the name of Sakyas, as for example, where king Suddhodana was asked by his minister to

"Command a festival  
Where the realm's maids shall be competitors  
In youth and grace and sports that *Sakyas* use."

Says Mr. R. C. Dutt, "A little to the east of the Kosala kingdom, two kindred clans, the Sakyas and the Koliyans, lived on the opposite banks of the small stream Rohini. \* \* Kapilavastu was the capital of the Sakyas.\*" The followers of Gautama Buddha were often spoken of as 'Sakyaputriya Sramanas', in contradistinction possibly to the Sramanas of other sects. We may therefore infer that the era of Gautama Buddha was probably known as 'Sakya Kala' in those times. The era could not have been called by the name of 'Nirvana Kala', for the evident reason that the term might equally apply to the Nirvana of Mahavira, the Jaina Saint.

The sloka quoted above is written in the usual Arya metre, whose nature is thus defined in works on Sanskrit rhythm:—

यसाः पादे प्रथमे द्वादशमात्रास्तयं तृतीयेपि ।

अष्टादश द्वितीये चतुर्थके पञ्चदश सार्या ॥

which means: "The first and the third quarters must each contain twelve matras, or syllabic instants (one being allotted to a short vowel and two to a long one), the second eighteen and the fourth fifteen". The sloka next following the one in question is the fourth in the chapter and satisfies the conditions required. Similarly, the first two slokas of the chapter are in faultless rhythm. But with regard to the third sloka, which is the one under discussion, only the first three quarters satisfy our rhythmic requirements. The last quarter, शककालस्तस्य गङ्गा, is however short by one matra. It is inexplicable how scholars, including Kalhana, could have hitherto overlooked such a glaring slip. From the fact that the *Rajatarangini* also makes this mistake, we may infer that the error might have been in existence from a very long time. It strikes me that the only way of correcting the error is by the insertion of the letter 'y,' which has been somehow omitted, be-

\*Colebrooke's *Mis: Essays*, Vol. II, p. 423. Weber's *Indian Literature*, p. 260.

† History of Indian and Eastern Architecture, p. 46. Fergusson's 'On the Saka, Samvat and Gupta Eras', pp. 11-16;

‡ India, what can it teach us. 1st edition, note G and Preface to 2nd edition, p. XVII.

§ Indian Literature, p. 202.

|| Fergusson's History of Indian and Eastern Architecture, p. 742.

¶ The Theosophist, Nov. 99, p. 109.

• \*\* Max Muller's *Ancient Sanskrit Literature*, p. 299.

\* Ancient India, Vol. I. p. 320.



tween the letters 'k' and 'a' in the word 'Saka.' If the expression 'Sakakala' be corrected into 'Sakyakala,' or 'Sākyakala,' the sloka becomes perfect and we shall have then the best of reasons to suppose that Garga refers to the era of Nirvana. 'Sakyakala' or 'Sākyakala' would then denote the epoch of the Sakyas, or of the Sakya prince Gautama, or of the Buddha called Sakya Muni. Most probably some early copyist, better acquainted with Sakakala than with Sakyakala, changed the latter into the former which he might have thought to be the correcter form. Even without the aid of such a correction, 'Sakakala' may be considered to be a corruption of the word 'Sakyakala.' Thus in any case the era of Buddha's Nirvana is the one most undoubtedly referred to.

We have next to determine what is meant by the phrase षड्विंशद्वि. As we have seen, Dr. Hultzsch interprets it as meaning 2526. But if only we look into the expression a little closely, we may arrive at quite a different result. In the Sanskrit language it is usual, when numerical expressions are employed, to put the units first, the tens after the units, the hundreds after the tens and the thousands after the hundreds, and so on. Thus, for instance, the number one hundred and twenty-five is written thus: five two one. Dr. Hultzsch thinks that the expression now being discussed is written thus: Six two five two, which, expressed in English figures, denotes 2526. But we have to take note of the letter 'क' in the middle of the expression षड्विंशद्वि. द्वि means 'twice', 'two times', 'a collection of two,' but not 'two' simply. If 'क' were a more expletive used for the purpose of metre, it may be asked why द्वय, which means 'two' simply, has not been used in preference to the ambiguous द्वि. When affixed to numerals the termination क is not an expletive and generally denotes 'so many times.' Such a precise mathematician like Garga cannot be expected to use the particle unnecessarily, especially when quite a different meaning is thereby rendered possible. In my opinion, the word षड्विंशद्वि means 'twenty-

six times,' and पञ्चद्वि means 'twenty-five'; in other words, the whole expression signifies "twenty-six times twenty-five," or 650.

If it be asked why such a round-about method of expression has been adopted to denote the simple number of 650 years, it may be urged in reply that Garga professedly computed here by the Saptarshi

cycle which denoted the lapse of every one hundred years by a new Nakshatra, and gave twenty-five years for each Nakshatrapada, into four of which a Nakshatra was then, as we have already seen, usually divided. If the Rishis had moved  $6\frac{1}{2}$  Nakshatras from the time of the coronation of Yudhishtira to the Nirvana of Buddha, that would be more appropriately expressed as the movement of the Rishis through twenty-six padas and the period denoted thereby would be put down as twenty-six times twenty-five years.

We have now come to understand by the sloka that 650 years had elapsed from the time of Yudhishtira to the beginning of Sakyakala or the era of Gautama's Nirvana. It may here be stated that though Max Muller offers very fair reasons for fixing the date of Nirvana in 477\* B. C., yet "there is perhaps no single point in the whole early history of India on which the chronicles of Ceylon and Further India are so distinct and unanimous than that Buddha died,—or as they express it, attained Nirvana—at the age of eighty years in the year 543 B. C."† The Dipawanso, the Pali chronicle of the fourth century A. D., computes by the era of Nirvana beginning in 544-3 B.C. But we are not concerned here with the question whether this date or Max Muller's date, 477 B.C., be the true date for the Parinirvana of Buddha. It is enough to note that Burma, Siam and Ceylon are all unanimous in giving the former date and that such widespread unanimity of opinion cannot be expected unless the era of 544-3 B. C. had existed from a very long time. In my opinion, the date given by the Buddhists of these three countries was the one current at the time of Garga. If the year 544-3 B. C. be incorrect, and the year 477 B. C. be the true date, we can only say that the error must have arisen long before the time of Garga who lived shortly after the lapse of three centuries from the Nirvana of Gautama Buddha. We are now in a position to understand the full force of Garga's statements that the Saptarshis moved by one Nakshatra in every hundred years, that they were in Magha when Yudhishtira reigned, and that 650 years had elapsed from that time to that of Buddha's Nirvana. These statements indicate to us that the coronation of Yudhishtira, and therefore the Mahabharata war, took place in the year (544 or 543 + 650, or) 1194-3 B.C.

There prevails in almost all parts of India what is generally known as the Brihaspati sixty-year cycle. The utility of such a small cycle lasting for about the lifetime of man, each year of which

\* Ancient Sanskrit Literature, p 299.

† Bigandet's Life of Gautama, p. 323.

is designated by a special name, is patent to every one who has lived in India. To a European, its efficacy would best be demonstrated if he be asked how his countrymen would feel in case the twelve months of the year had no names given them, but had to be denoted by numerical figures. This cycle seems to have been in use in India from a very long time\*. In commenting on Taittiriya Brahmana, I. 4. 10, Sayana says that this cycle comprised twelve of the ancient five-year cycles, which are so often referred to in the Vedic works† and in the Vedanga Jyotisha. Colebrooke thinks that the period of Jupiter (Brihaspati) was introduced by the ancient Hindus in conjunction with those of the sun and the moon in 'the regulation of the calendar, sacred and civil, in the form of the celebrated cycle of sixty years.‡ As the sun and the moon take about five years to return both to the same position at the beginning of a year, a fact which gave rise to the cycle of the five years, known as *Samvatsara*, *Purivatsara*, *Ilavatsara*, *Anuvatsara* and *Idvatsara* respectively, and as Jupiter makes a complete circuit of the heavens in about twelve years, it is evident that all the three heavenly bodies were expected to return to the same celestial region on the expiry of every sixty years. But in consequence of a correcter knowledge of Jupiter's motions, Northern India has been, for some time past, expunging one year of the cycle in every  $85\frac{6}{11}$  years, so that, after one such period, the name of the next year is left out and the name of the one following the next year taken to be the next year's name. As no such, evidently a comparatively recent, practice prevails in Southern India, the current year (April 1901 to April 1902), which is the year 'Prunadicha' in the North, is the year 'Plava' in the South.

At whatever time the cycle might have first originated, it appears to me that, when the names therefor were invented, the year of the Mahabharata War, the only famous epoch in the history of Ancient India, was named 'Prabhava,' the name of the first year of the cycle. But the dates usually given by the orthodox for the war or for the beginning of the Kaliyuga do not correspond to the first year of the cycle. On the other hand, if we adopt the date given by Garga for the epoch of Yudhishtira, i.e. 1194-3 B. C., we find that the corresponding year of the Jupiter cycle for

that date is 'Prabhava,' the name of its very first year.

We have already suggested that the Kaliyuga began at the winter solstice of the year 1177 B. C. We have also seen that, barring the argument based on Rajatarangini which gives us about 1190 B. C. for the war, our other lines of discussion point to 1194-3 B. C. as the probable date of the war. We shall now find that this date is further confirmed by the application of the principles of the Vedanga Jyotisha to certain statements contained in the Mahabharata itself. We may here observe that these statements are not to be explained by the astronomical calculations of modern times, for these were unknown in the days of the War, but rather by the calculations of the Vedanga Jyotisha, which, though cruder, are better applicable to them, inasmuch as the Vedanga is the oldest Hindu astronomical treatise known to us and its astronomical details, as we have seen, relate to the beginning of the Kaliyuga.

In the Swargarohanika Parva of the Mahabharata, we are told that Yudhishtira having observed 'that the sun ceasing to go southwards had begun to proceed in his northward course' \* set out to where Bhishma lay on his bed of arrows. After telling Yudhishtira, who had in the meantime arrived, that the winter solstice† had set in, Bhishma said §

माघीयं समनुप्रातः मासस्तौम्यो युधिष्ठिर ।

विभागशेषः पक्षायं शुक्रोभविष्यति ॥

Babu Pratap Chunder Roy translated it thus:— "O Yudhishtira, the lunar month of Magha has come. This is again the lighted fortnight and a fourth part of it ought by this be over." Whatever historical weight may be attached to these statements, they may be at least taken to mean that the winter solstice then occurred on the expiry of the fourth part of the bright fortnight in the month of Magha, that is, on the fourth or the fifth day after new moon, Nilakantha, the commentator of the Mahabharata, thinks that the expression विभागशेषः पक्षः denotes 'Magha Sukla Panchami' ‡, or the fifth lunar day in the month of Magha after new moon. But Mr. Rangacharya || interprets the sloka to mean that the winter solstice occurred after the expiry of one-fourth part, not of the bright fortnight, but of the month of Magha, and thus he seems to think that the winter solstice took place on the eighth day after new moon.

\* Warren's Kala Sankalita, p. 212.

† Taittiriya Samhita, V. 5. 7.; Taittiriya Brahmana, III. 4. 11; I. 4. 10; III. 10 4. Taittiriya Aranyaka, IV. 19; Vajasaneya Samhita, XXVII. 45.

‡ Dutt's Ancient India, Vol. II, 242.

\* Anusasana Parva, CLXVII. 6.

† Ibid. v. 26. § Ibid. v. 28.

‡ Com. on Bhishma Parva, XVII. 2.

|| See his article in the Indian Review for October, 1900.

He makes त्रिभागशेषः qualify मासः, the fourth word in the first line, instead of पक्षः, the next following word. In the first place, the Anushtup verse, in which metre this and the adjoining slokas are written, generally consists of four quarters consisting of eight syllables each. "The fifth syllable of each quarter should be short, the sixth long, and the seventh alternately long and short." But though the fifth syllable in every other quarter in this verse and in all the quarters of the other verses is short, the fifth syllable of त्रिभाग शेषः पक्षोयं alone is long owing to the addition of the 'visarga.' If the 'visarga' be left out, the rhythm of the sloka becomes good enough. In that case, त्रिभागशेषपक्षः becomes one word and त्रिभा-गशेष cannot but apply to पक्ष. But even without our resorting to this examination of the rhythm of the verse, it strikes me that the novel interpretation of Mr. Rangacharya seems to be a forced one. The first line of the verse is complete by itself, as also the second line. Why should a word in the second line be taken to qualify a distant word in the first line instead of the next following word? The more natural interpretation appears to me therefore to be that given by the learned commentator of the epic and adopted by the translator thereof, namely, that the winter solstice happened on the fifth lunar day after Amavasya in the month of Magha.

It may be observed that the Vedanga states § that at the beginning of every five-year cycle the winter solstice took place on a new moon day with the sun and the moon together in Dhanishta Nakshatra. In verse 10, "we find an enumeration of the Nakshatras, or rather of the divinities presiding over the Nakshatras, in which the moon stands at the beginning of the ten Ayanas of the Yuga,"\* that is, at the ten solstices of a five-year cycle. The ten Nakshatras are Sravishtha, Chitra, Ardra, Purvaproshtapada, Anuradha, Aslesha, Aswayuj, Purvashada, Uttaraphalguni, and Rohini.† But the Mahabharata states that the winter solstice occurred on the fifth lunar day after Amavasya. As according to the Vedanga‡ the winter solstice always occurred with the sun in Dhanishta, the Amavasya referred to by the Mahabharata must have occurred with the sun and the moon in Sravana Nakshatra; and as the

winter solstice occurred on the fifth day after this, the moon must have been, on the solstitial day, in or near Revati Nakshatra. According to the Jyotisha,\* this position could have occurred only at the beginning of the fourth year of a five-year cycle, for it was then that the moon was in Aswayuja, next to Revati Nakshatra. The difference of this one Nakshatra is due to "the imperfections of the elements of the Jyotisha."† Thus we may infer that the winter solstice following the Mahabharata war, and just preceding‡ Bhishma's death, was the fourth of the five winter solstices of a five-year cycle. The particular five-year cycle in which the Mahabharata war took place appears to have been the fourth cycle previous to the beginning of the Kaliyuga in 1177 B.C., inasmuch as we have found that the Rajatarangini points to 1190 B.C., and that all other lines of discussion lead to 1194-3 B.C., as the probable date of the War. Consequently, the winter solstice shortly following the War was the fourth of the fourth five-year cycle preceding the commencement of the Kaliyuga, which began, like the five-year cycle, with a winter solstice and with the sun and the moon in Dhanishta Nakshatra. In other words, the Mahabharata war took place a little before the seventeenth winter solstice preceding the commencement of the Kaliyuga, or towards the end of the year 1194 B.C.

To summarize the arguments above set forth:—We were first enabled by the Vedanga Jyotisha to place the beginning of the Kali era approximately at about 1173 B.C.

Secondly; After enquiring into the date of Garga and of the Yavana invasion he spoke of, we noted that he fixed 'the end of the Yuga' for the retirement of the Greeks from Hindustan. From this statement we inferred that the Yuga, which ended sometime before 165 B.C., must have begun a few years before 1165 B.C.

Thirdly; In explaining the figures given by the classical historians, we came to the conclusion that the Kaliyuga must have begun in 1177-6 B.C.

Fourthly; The Malabar era furnished us with another authority for fixing the commencement of the Kali era in 1176 B.C.

Fifthly; We found that if the Kali commenced at the winter solstice immediately preceding the year 1176 B.C., the details of the Mahabharata would lead us to place the war at the end of the year 1194 B.C.

Sixthly; The tradition recorded in the Rajataran-

§ Yajur recension of Vedanga Jyotisha, v. 5 and 8.

\* Dr. G. Thibaut's Vedanga Jyotisha, p. 22.

† Verses 10, 32, 33 and 34:

‡ Verses 5, 6 and 7.

\* Verses 10 & 32-34.

† Dr. G. Thibaut's Vedanga Jyotisha, p. 22.

‡ Anusasana Parva, CLXVII, 26-28.

gini enabled us to fix the date of the war about 1190 B. C.

Seventhly; From a statement made by Aryabhata that the Rishis were in Magha in the year 1192 B. C., we inferred that the war might have taken place at about 1193 B. C.

Eighthly; The average duration of the reigns of the monarchs of the five foremost Powers of our hemisphere served to assist us in fixing the date of the war at about the year 1193 B. C.

Ninthly; From a sloka of Garga quoted in the Brihat Samhita, we inferred that the war occurred in the year 1194-3 B.C.

Tenthly; We also found that the first year of the Brihaspati cycle of sixty years actually corresponds, as might naturally be expected, to the date of the war as given by Garga, i.e., 1194-3 B.C.

Eleventhly and lastly; We applied the elements of the Vedanga Jyotisha to a sloka contained in the Mahabharata, which fixes the day of the winter solstice occurring soon after the war, and concluded that the war should have taken place in the latter part of the year 1194 B. C.

Thus we find all this cumulative evidence derived from different sources converging to the result that the Kali era began at the winter solstice occurring at the end of 1177 B.C., and that the Mahabharata war took place at about the end of 1194 B.C. In arriving at these conclusions, we had the testimony of the only historian that India can boast of who lived in the twelfth century A. D., of the greatest of the astronomers of India who flourished at the end of the fifth century A. D., of another brilliant astronomer who shone in the second century B. C., and of a versatile Greek historian who was also an ambassador at the court of the first great historic Emperor of India who reigned in the fourth century B. C. We had also the authority of the oldest astronomical work of India which claims to be a supplement to the Vedas, of an ancient era which forms such a "splendid bridge from the old world to the new," and of the famous sixty-year cycle. We tested these conclusions by what we may call the common-sense process based on the lists of kings contained in the Puranas. During this long and tedious discussion we have also met and disposed of the arguments of those that give an earlier date.

We are particularly fortunate in having been able to find out so many reasons, for in the province of ancient Hindu chronology one is not often able to support one's opinions by more than a few authorities. As we proceed to discuss the significance and the origin of the system of the Chataryugas, we shall also find further corroborative

testimony to the correctness of the views I have herein ventured to put forth.

So far we have been treading on more or less firm ground. But if we attempt to fix the actual days of the year 1194 B.C. when the War may be supposed to have been fought, our authority will have to be the epic itself, by itself an unsafe guide. As has already been remarked, the Mahabharata is unfortunately neither the work of one author, nor of one age. Sir Monier Williams\* thought that the compilation must have proceeded for centuries; and Weber says:—"Of the Mahabharata in its extant form, only about one fourth (some 20,000 slokas or so) relates to this conflict and the myths that have been associated with it; and even of this, two-thirds will have to be sifted out as not original, since in the introduction to the work (I. 81.) the express intimation is still preserved that it previously consisted of 8800 slokas only."† "But as to the period," says Weber, "when the final redaction of the entire work in its present shape took place, no approach even to direct conjecture is in the meantime possible; but, at any rate, it must have been some centuries after the commencement of our era".‡ Professor Macdonell, the author of the latest work on Sanskrit Literature, assumes "that the original form of epic came into being about the fifth century B.C." § The late Professor Wilson || considered the probable date of the epic poem to be about the third century B. C.

It has been recently proposed to start an Indian Epic Society mainly for the purpose of sifting out the older portions of our incomparable epic. But the labours of such a Society, when brought to a successful termination, will not, in my opinion, militate against the authenticity of the texts we are presently to discuss. Most of these belong to the war portion of the Mahabharata, which, according to Weber, is recognisable as the original basis ¶ of the epic.

We have already referred to a sloka \*\* of the epic which states that the winter solstice, which took place soon after the war, happened on the fifth day after new moon in the month of Magha. In the very next preceding sloka, Bhishma tells Yudhishtira that he has been lying on his 'spiky' bed for the previous fifty-eight nights. It may be

\* Indian Wisdom, Lect. XIII. 371.

† Indian Literature, p. 187.

‡ *Ibid.*, p. 188.

§ Sanskrit Literature, p. 285.

|| Wilson's Introduction to Translation of Rig Veda, Vol. I, p. XLVII

¶ Indian Literature, p. 187.

\*\* Anusasana Parva, CLXVII, 28.

observed that the bed referred to here consisted of the countless arrows that, shot from Arjuna's Gandiva, stuck into Bhishma's body. As soon as Bhishma fell down mortally wounded, the roar of the tenth day battle ceased; and on the warriors of both the sides assembling to have a look at the wounded soldier, he asked for a pillow to match his heroic 'bed.' "The kings standing there then fetched many excellent pillows that were very soft and made of delicate fabrics," seeing which, Bhishma "said with a laugh, 'These, ye kings, do not become a hero's bed.'"<sup>\*</sup> Arjuna alone understood the intentions of his grandsire and immediately provided a pillow made of three well-placed arrows to the immense satisfaction of the veteran warrior. Among Hindus it has for long been considered good for one's future state, for death to occur in the period between the winter and summer solstices. The grand old Bhishma did not allow the arrows sticking into his body to be removed lest he might die before the commencement of the auspicious period, but rather preferred to suffer the excruciating pain, to which one with a less magnificent *physique* would have speedily succumbed. So firm was the indomitable will of this stern warrior, this noblest figure in all Mahabharata, that he cared little for the terrible agony of these fifty-eight nights and more. How remarkable was the power of religious conviction in those early heroic times!

The war is expressly stated in the epic† to have lasted for eighteen consecutive days. Moreover, in the Dronabhisheka‡ Parva, Karna is said to have refrained 'from taking part in the war for the ten days' during which Bhishma was the generalissimo of the Kaurava army. In the last chapter of Drona Parva it is stated that 'Drona,' who was the next Commander-in-chief, 'was slain after having fought dreadfully for five days.' Karna led the army § for the succeeding two days, and on the night of the next|| day after Karna's death, the war was brought to an end. When Yudhishtira was lamenting the death of Ghatotkacha on the fourteenth night of the war, Vyasa is said to have told Yudhishtira that 'in five days the earth would fall under his sway.'¶ From these references also it is clear that the war continued for eighteen consecutive days. As Bhishma was mortally wounded on the tenth day of the war, as the war lasted for eight days

more, and as Bhishma is reported\* to have stated on the day of the winter solstice that he remained on his bed of arrows for fully fifty-eight nights, the interval between the end of the war and the solstitial day was fifty days. As a matter of fact, this very † number of days is stated as the period of the stay of the Pandavas in the city of Hastinapura, which they entered on the next‡ day after the war, until they set out on their last visit to Bhishma on the day of the winter solstice. The epic says: "The blessed monarch (Yudhishtira) having passed fifty nights in Hastinapura recollected the time indicated by his grandsire (Bhishma) as the hour of his departure from this world. Accompanied by a number of priests, he then set out of the city, having seen that the sun ceasing to go southwards had begun to proceed in his northward course."§ After Yudhishtira reached Bhishma, the latter addressed him in these words: "The thousand-rayed maker of the day has begun his northward course. I have been lying on my bed here for eight and fifty nights."|| We may therefore conclude that the winter solstice took place on the fifty-first day from the close of the war.

On the next¶ day after the close of war, Sri Krishna and the Pandavas paid a visit to the dying Bhishma, whom Sri Krishna addressed in the following words:—"Fifty-six days more, O Kuru Warrior, art thou going to live." \*\* One need not be misled by the prophetic nature of this expression and declare it to be of no historic value. It might well have been a fact and put in the form of a prophecy by the compiler of the epic. But it may be asked how Bhishma could have lived fifty-six days after the close of the war, if only fifty days had elapsed from that time to the winter solstice when Bhishma hoped to give up his life-breath. But the explanation appears to me to be simple enough: though the winter solstice occurred fifty days after the close of the war, Bhishma does not seem to have died on the solstitial day, when the arrows were extracted from his body, but appears rather to have lingered on till the sixth day after the winter solstice. We have seen that the sol-

\* Anusasana Parva, CLXVII. 26 and 27.

† *Ibid.* 5 and 6.

‡ Stri Parva, XXVII. Santi Parva, XLI and XLV. The Pandavas desired to pass the period of mourning which extended for a month outside Hastinapura (Santi Parva, I. 2); but their intention seems not to have been carried out.

§ Pratap Chunder Roy's Translation: Anusasana Parva, CLXVII. 5 and 6.

|| *Ibid.* 26 and 27.

¶ Stri Parva, XXVII. Santi Parva, XLI. XLV. and LII.

\*\* Rajadharmanusasana Parva, VI. 14.

\* Bhishma Parva, CXXI.

† Asramavasika Parva, X. 30.

‡ Sections II and V.

§ Karna Parva, I. 15.

|| Salya Parva, I. 10-13.

¶ Drona Parva, CLXXXIV, 65.

stice took place then on the fifth lunar day after new moon in the month of Magha. It was on the sixth day from this, that is, on Magha Sukla Ekadasi, that Bhishma, "that pillar of Bharata's race," seems to have "united himself with eternity." Tradition asserts that Bhishma died on this very day, and our almanacs even now make note of the fact and call the day by the name of "Bhishma Ekadasi." To this day, death on the eleventh lunar day of the bright fortnight of the month of Magha is held in great esteem, and next to that, death on such a day of any other month. Possibly the supposed religious efficacy rests on the memory of the day of the royal sage's death.

As the fifty-ninth day after Bhishma's fall corresponded to Magha Sukla Panchami, Revati or Aswini Nakshatra, the day of Bhishma's overthrow, which took place on the tenth day of the war, happened, in accordance with the principles of the Vedanga,\* on Margasirsha Sukla Panchami, in Dhanishta Nakshatra; and the Amavasya preceding it happened on the fifth day of the war in Jyeshtha Nakshatra. As a matter of fact, Dr. G. Thibaut † gives this very Nakshatra for the last Amavasya but two of the third year of a five-year cycle, which particular new moon our Amavasya actually is. We may therefore conclude that the war began on the fourth Nakshatra preceding Jyeshtha or in Chitra of the month of Karthika and ended in Rohini Nakshatra in Margasira month.

The Pandavas tried many milder means before they at last resorted to the arbitrament of war; they even proposed to sacrifice their interests to some extent, if war could thereby be averted. Sri Krishna was the last to be sent on a mission of mediation and he started for Hastinapura "in the month of Kaumuda, under the constellation Revati, at the end of the Sarad (autumn) season and at the approach of the Hemanta (dewy season)." ‡ According to the commentator and also to the translator, Kaumuda is the Kartica month. As the latter half of autumn corresponds to the month of Kartica, we may be certain that the statement means that Sri Krishna left for Hastinapura in the Revati Nakshatra of the month of Kartica. His efforts at reconciliation having been of no avail, he seems to have returned to the Pandava camp in Pushya Nakshatra, for, as soon as he left Hastinapura, Duryodhana asked his warriors immediately to march the army to Kurukshetra, "For to-day the moon is in the constellation of Pushya". A little

before Sri Krishna's departure from Hastinapura, he proposed \* to Karna :

सप्तमाचापि दिवसात् अमावास्याभविष्यति ।

संप्रामो युज्यतां तस्यां तामाहुश्चक्रदेवतां ॥

"In seven days will there be new moon ; let the war be begun on that day which, they say, is presided over by Indra." As the commentator says, "Sakradevatam" denotes the Jyeshtha Nakshatra, which is presided† over by Indra. The verse therefore indicates that the approaching Amavasya was to happen in Jyeshtha Nakshatra. This serves to confirm our inference drawn from other texts, that the Amavasya, which occurred on the fifth day of the war, took place in Jyeshtha Nakshatra. But, to say that the new moon would occur on the seventh day seems to be certainly wrong, for Krishna was speaking to Karna in Pushya Nakshatra and the Amavasya was said to occur in Jyeshtha, the tenth Nakshatra from Pushya. Probably 'सप्तमात्' is an error for 'दशमात्.'

The war, however, did not begin in Amavasya as suggested by Sri Krishna, for, as we have seen, Duryodhana moved out his army to Kurukshetra on Pushya Nakshatra. The Pandavas ‡ too seem to have marched out of Upaplavya on the very same Pushya. Both the contending parties were in such a hurry to march their armies to the battle-field, because Pushya Nakshatra was considered auspicious for such purposes. Yet, it was not possible to begin the actual fighting on the very same day. Much remained to be done before the armies could meet each other in battle array. If Sri Krishna returned from Hastinapura with the answer of Duryodhana on Pushya Nakshatra, it is reasonable to allow some time for the marching of troops, for the ground to be cleared, for the pitching of tents, for the divisions of the armies to be properly effected, and, most of all, for the allied princes to bring on their respective divisions to the field of battle. It appears to me that all these preliminary arrangements were gone through during the interval of the five days between Pushya and Chitra, in which Nakshatra the fighting actually began. But our epic says that both the parties were prepared for battle on the day when the moon had gone to the region of Magha. § The natural interpretation ¶ of the expression is that on that day the moon was in Magha Nakshatra. In that case

\* Udyoga Parva, CXLII. 18.

† Taittiriya Samhita, IV. 4. 10. Taittiriya Brahmana, I. 5. 2

‡ Salya Parva, XXXV. 10 and 15.

§ Bhishma Parva, XVII.

¶ The commentator gives such a glaringly far-fetched interpretation, that we need not pause here to discuss it.

\* Vedanga Jyotisha, Yajur Recension, V. 31.

† Dr. G. Thibaut's booklet on Vedanga Jyotisha, p. 15-17, Amavasya No. 36.

• ‡ Udyoga Parva, LXXXIII. 7.

we have to suppose that though the armies were almost ready for war in Magha Nakshatra, the first shot, to use a modern expression, was not fired till after the lapse of three more days. The armies began their march to Kurukshetra in Pushya, were organized in effective divisions in Magha, and actually engaged in battle in Chitra. Or, it may be that 'Magha' is an error for 'Maghava.' The expression then would mean that the moon had entered the region of Indra, that is, the star Chitra presided over \* by Indra. If the emendation prove to be correct we have here another testimony to the correctness of our conclusion that the War began in Chitra Nakshatra.

It must be borne in mind that the Epic was cast into its present form more than a thousand years after the date of the war. How many alterations, additions, omissions and errors must there have been made during this vast period! There are many statements in the epic which conflict with one another, a circumstance which can be accounted for only on this historic basis.

One such conflicting statement occurs in the Gadayudha Parva. On the last day of the war Balarama returned to Kurukshetra from his pilgrimage to the banks of the Sarasvati, † whither he had gone on the eve of the war in utter disgust with this horrible fratricidal war. He said:—  
 "Forty-two days have elapsed since I proceeded forth; I left on Pushya, I have returned in Sravana."  
 ‡ The epic states expressly that the Pushya Nakshatra on which Balarama went away on pilgrimage was the one § on which the Pandavas set out of Upaplaya to the field of battle. It also certainly implies || that the Sravana Nakshatra on which Balarama returned happened on the last day of the war. If these statements are to be taken as authentic, the obvious inference is that the war, which began with the marching of armies to Kurukshetra on Pushya, came to an end in Sravana forty-two days later. This conflicts directly with the natural inferences we have drawn from the other statements, namely, that the winter solstice occurred on Magha Sukla Panchami fifty days after the close of the war, that the war lasted for eighteen consecutive days, that the Amavasya which occurred on the fifth day of the war took place in Jyeshtha Nakshatra, and that Sri Krishna left for Hastinapura on his errand of peace

\*Taittiriya Samhita, IV. 4. 10. Taittiriya Brahmana, I 5. 2.

† The bed of this river is still visible near Kurukshetra and Thanesar. Dutt's Ancient India, I: 62.

‡ Salya Parva, XXXIV. 6.

§ Salya Parva, XXXV. 10—15. Udyoga Parva, CLVII. 16—35.

|| Salya Parva, LIV. 32.

on Revati Nakshatra of Kartica month and returned to Upaplaya on the next following Pushya. To avoid such a contingency two explanations of this manifestly corrupt text are possible. We have either to suppose that the statements about Balarama's departure on the eve of the war and about his return on the last day thereof are spurious as being opposed to the united testimony of other texts, or that the verse under discussion requires a little emendation. In the former case the inference to be drawn from the sloka is that Balarama left for the Sarasvati in Pushya Nakshatra twenty-seven days before the march of troops on the next Pushya Nakshatra to the battle field and that he returned to Kurukshetra in Sravana some days before the close of the war. If, however, the sloka is incorrect, we may best correct it by changing 'forty-two' into 'twenty-four'. If Balarama had left on pilgrimage in Pushya and returned on the last day of the war, that being the twenty-fourth from the day of his departure, the last day of the war would happen in Robini, a result which is identical with the one we have already deduced from other texts. In that case the sloka, which now runs,

“चत्वारिंशद्धान्यद्य द्वे च मे निःसृतस वै ।

पुष्येण संप्रयातोस्मि श्रवणे (श्रोण्यां) पुनरागतः ॥,”  
might then read :—

चतुर्विंशद्धान्यद्य चासन्म निःसृतस वै ।

पुष्येण संप्रयातोस्मि रोहिण्यां पुनरागतः ॥

There is one other conflicting verse which we shall briefly discuss. On the fourteenth night of the war there was a tremendous battle between the contending parties. It is hinted in the epic \* that the moon rose up on that night after three-fourths part of it had expired. This is certainly a mistake; for the new moon having taken place on the fifth day of the war, the moon should have disappeared below the western horizon about an hour and a half before three-fourths of the night were over. On the evening of the fourteenth day of the war, Arjuna's vow to kill Jayadratha having been fulfilled, the Kurus, burning with revengeful thoughts, continued the strife far into the night. The epic would have us believe that during the first half of the night a tremendous battle raged in total darkness resulting in the death of Ghatotkacha, that both the armies thereafter lay down to sleep for some time, and that on the rise of the moon at about three o'clock in the morning, both the sides recommenced their fighting. It is more probable that the war continued for as long as the moon was

\*Drona Parva, CLXXXV. 28 and 46—56; and CLXXXVII, 1.

shining and that the armies rested when the moon had set. The poet was perhaps led to make this mistake by his anxiety to render the night sufficiently horrible for Rakshasa heroes to fight with their powers of illusion. For, it must be remembered that the Rakshasa Ghatotkacha on the side of the Pandavas and the Rakshasa Alayuda on the Kaurava side are represented as having made the night hideous by their powerful uncanny powers, which could only be used effectively in total darkness.

But, barring these two conflicting statements which too may be explained away, all other texts serve, as we have seen, to support our conclusion. We are told that the winter solstice happened on Magha Sukla Panchami, that the tenth day battle happened fifty-eight days before it, that Bhishma, who died on Magha Sukla Ekadasi, gave up the ghost fifty-six days after the close of the war, that a period of fifty days intervened between the end of the war and the winter solstice, that the war lasted for eighteen consecutive days, that the Amavasya, which occurred soon after the commencement of the war, happened in Jyeshtha Nakshatra, that the armies began their departure to the field of battle in Pushya Nakshatra, and that Sri Krishna had proceeded to Hastinapura on his mission of mediation on the preceding Revati Nakshatra in the month of Kartica. All these point but to one conclusion, namely, that the war, which lasted for eighteen consecutive days, concluded on the fifty-first night before the winter solstice.

At present the winter solstice falls on the 21st of December. The Gregorian system, which is the basis of the calendars of all Europe, except Russia, Greece and Turkey, "involves an error of less than a day in 3524 years".\* As the war took place in 1194 B.C., or 3094 years ago or 2776 years before the calendar was last corrected by Pope Gregory XIII, we may be certain that the winter solstice which occurred on the fifty-first day after the close of the war, would have happened, as now, on the 21st of December (New Style). We may therefore conclude that the War commenced on the 14th of October, and was brought to a close on the night of the 31st of October, 1194 B.C. Whether or not this precise date, based as it is on data furnished by the Mahabharata alone, proves to be acceptable to the critical eye of a historian, we may at least be sure that the War took place in the latter part of the year 1194 B. C.

VELANDAI GOPALA AIYER.

## THE VICEROY ON INDIAN EDUCATION.

THE speech of the Viceroy at the opening of the Educational Conference at Simla equals his previous utterances in eloquence and candour, while, in clearness of perception and strength of grasp, it far surpasses them. Pessimists may remind us that the finest sentiments and the most liberal principles are apt to become ineffectual when working through Indian red-tape; but he would be a chronic grumbler who could withhold the tribute of grateful admiration so justly due to the dignity, the earnestness, and the noble purpose that animated the address. Our whole system of education has at last come within the range of a mind which, if not above error or prejudice in practice, is both able and resolved to know facts and devise reforms. If only the Conference formulated suggestions that were not marred by impracticable haste or enfeebled by excessive compromise, it would be reasonable to hope for some substantial advance in educational matters, not wanting in proportion to the great fuss and expense of the Olympian gathering. The depths of the educational ocean have been stirred; and if it is folly to expect the agitated waters to yield the nectar of educational perfection, it is by no means too much to look for the production of benefits comparable to the moon and celestial damsels of ancient fable that shall dispel the prevailing darkness and gladden our homes.

Lord Curzon anticipated that the exclusion of the native element from the composition of the Conference would cause dissatisfaction. His answer, however, does not seem convincing, or even perfectly clear. They were not met there, he said, to devise a brand new plan of educational reform or launch a vast and sudden enterprise upon the Indian community. This might be taken to imply that, if such a plan or enterprise was intended, the Indian public would have been represented on the Conference. As it was, they were

\* B. G. Hopkins's Astronomy, p. 68.



official experts gathered together to give first-hand information and guard the authorities at headquarters from making mistakes. Is it to be supposed that Indian educationists would not be of use in the collection of facts or the prevention of official errors? Are there no facts outside the reports of European officers, no needs except such as are apparent to European minds, no warning or advice that an Indian may be qualified to offer? The Viceroy was careful to declare that he desired "to take the outside public into our confidence in order that they may know the nature of the difficult problem that we are studying and may help us with their disinterested opinions upon it." These disinterested opinions of the outside public, then, will be helpful if they take the form of humble memorials or newspaper criticisms, but would be embarrassing from chosen men speaking as members of a Conference! No offence might have been intended; but Lord Curzon and his advisers must not wonder if a community that sent representatives to the great Education Commission refuse to be reconciled, even after his soothing explanation, to their exclusion from a Conference held nearly twenty years later, composed though it be of picked experts.

This exclusion is deplorable for another reason also. Full and unequivocal as the opening address is, it contains no indication of the Viceregal attitude on a question in regard to which the public mind of this country, thanks to hostile critics in England no less than here, is full of apprehension. The higher education of the Indian, mistakenly regarded as the cause of political discontent, has been now and again threatened with extinction or at least serious discouragement, and the recent statement of Lord George Hamilton in Parliament that primary education would be the special object of solicitude of the Simla Conference, innocent and even welcome by itself, was, by a section of the public who have no reason to suppose that the Secretary of State for India is particularly well disposed to them, received as indicating a desire to

withdraw from a field where the wind was conceived to be sown that might one day grow into the whirlwind. We do not ignore the Viceroy's 'disclaimer,' as he himself called it, but that was with reference to the whole question of education and cannot be considered re-assuring in respect of a branch thereof. No doubt the Viceroy's faithful adherence to the recommendations of the Education Commission is incompatible with an inclination to relax State effort or aid in collegiate and secondary education; and other points in his address seem to point to an anxiety to place it on a better footing than ever before. But it must at the same time be remembered that the Commission's Report is not irreconcilably opposed to the withdrawal of Government from the support of higher education, but only recommends stringent conditions and extreme cautions against premature withdrawal; and whether the circumstances of the present time justify or do not justify the withdrawal is largely a question of fact on which the European expert's opinion will be allowed to prevail. In such a matter, unfortunately, he cannot in nature be expected to see eye to eye with the native of India, whose views, therefore, if he is to be dealt with fairly at all, ought to have been duly represented at the Conference.

A possible misconception must here be guarded against. Just as we are, perhaps, too ready to construe a solicitude for primary education as proceeding from antipathy to higher education, our opponents may be inclined to mistake our tenderness for higher education for callousness to the profound ignorance of the masses. In fact, however, in the opinion of the present writer, the graduates turned out annually from our Universities are in nothing so justly blameworthy as in their total failure to redeem, in even a slight measure, their solemn pledge at Convocation to spread the benefits of enlightenment among the illiterate people around them. No part of the Viceregal address is fraught with more momentous consequences to the welfare of India than the one.

dealing with primary education. Trite as it is, Lord Curzon laid no more than just emphasis on the value of primary education as an ally in the work of civilised administration, whose ways cannot be understood and whose calls cannot be responded to, by a people steeped in ignorance. If the Viceroy doubled the area over which primary education is now spread and did nothing else, he would become entitled to grateful remembrance by the people. It is to be devoutly wished that the hopes raised by his speech on this subject will be realised in part at least. He used the expression primary education as being synonymous with Vernacular education. If this means that the subjects of instruction should be taught through the Vernacular, that is what happens at present. Actual educationists may feel that some confusion would result from the interchange of the expressions, for Vernacular education may extend to higher stages than the primary. A slight elevation of the standard of primary instruction and improvement on practical lines of the curriculum, not necessarily leading up to the higher courses, but complete at that stage, will answer the needs of the masses. The Viceroy deplored the partiality of the people for-English teaching schools in preference to purely Vernacular schools, and attributed to it in part the slow advance made by primary education. There is much truth in this remark. Perhaps it would be futile to expect this preference to disappear altogether at any time; but its evil results may in part be cured by a more active interference by the Department of Education with what is now quietly ignored as indigenous education. This indigenous education survives in its primitive condition from remote times on a scale perhaps unsuspected by the higher officers of the Department. The labouring classes are at present able to avail themselves only of this education. If these 'pial' schools, as they are called in this part of the country, could be improved, if their curriculum and methods of teaching could be rationalised, and their work in general brought more into line with the

regular primary school, that would be the readiest and perhaps the least expensive means of extending the sphere of primary education. We say the least expensive, for, as the Viceroy himself has recognised, the chief difficulty in the way of educational advance is the question of money. Local Boards and Municipalities are contributing in nearly all cases quite as much as they possibly can towards education. Additional taxation of the people is out of the question. Private munificence in the province of education is very much to seek. The State cannot therefore 'divest itself of its responsibility', but must increase its contribution by retrenchment in other directions and by a more equitable apportionment of provincial and imperial funds. We have no doubt the Conference will make it clear to the authorities that the cause of education has been seriously injured during several years past by the inadequacy of the funds allotted for that purpose. The Viceroy himself, after mentioning the amount of State contribution, asked, "Is the State contribution sufficient? Ought it to be increased?" The public may sanguinely expect that the state will be pledged to a policy of progressive expenditure on education, and that the improvement of public education will thus be placed on the most secure footing.

But if this point connected with primary education is clearly brought out in the Viceroy's address, there is another of only slightly less importance that does not appear to have attracted the Viceregal eye in an equal degree, that is, the miserably low status of the primary teacher. His general qualifications, his technical fitness, his emoluments, his social position are alike incredibly low, and built on such foundation as he can lay, it is little wonder that secondary and collegiate education have so many crying defects. On this point no words of an outside critic can be more effectual and convincing than those of the Madras Director of Public Instruction in para 95 of his latest report. His views, with which the Governor in Council expresses his agreement, are couched in language

of reserve and moderation appropriate to official reports, but even so are sufficiently strong and pointed.

"In regard to primary teachers, however, there is much that needs to be done. Their general educational qualifications should, in my opinion, be much higher than those now demanded by the educational rules. It is a mistake to suppose that a teacher of low qualifications is good enough for a primary school. The primary teacher has a responsible office to perform, for it is in this early stage that those tendencies of thought and feeling are initiated that form the basis of character, and if they are started in wrong grooves the result will be disastrous. It may be, perhaps, too soon to insist on every teacher having some knowledge of child-psychology, but it is high time that a higher standard of general attainments should be demanded. It is not possible for a teacher to achieve success in the Kindergarten School or to teach an object lesson successfully without a higher and broader mental training than primary teachers are now supposed to have had. The cry has frequently been raised in the educational journals of this presidency, in papers read before teachers' associations, in the resolutions of the Teachers' Guild, that the status of the primary teacher is scandalously low, and should be immediately improved. It is perfectly true that even for the attainments now required for this class of teachers the salaries (ranging from Rs. 5 to 8) are exceedingly low. But it is equally true that the teacher himself needs to be improved. And it follows as a matter of course that there should be a corresponding increase in the emoluments offered. But if this is to be done, managers must be prepared to spend more money on their primary departments. Further this department itself must be prepared to give higher grants to primary schools. But for this more funds should be placed at its disposal, and until this can be done it will be futile to expect any substantial improvement in the condition and prospects of primary education."

But if the primary teacher suffers the most from low status and prospects in life, other teachers also suffer, though not to the same extent, from similar hardships. From the time when the State withdrew from the direct management, keeping only the general supervision, of colleges and secondary schools, the teaching profession has steadily deteriorated. Without a rising salary during active service or a pension on retirement, having little social consideration and shut out from civic honours, never feeling secure in his situation and always looking for something else to turn up, regret behind and despair before, the present-day schoolmaster is too often an object of pity. No wonder the profession has ceased to attract a fair proportion of the young men of merit available for the service of the community or to retain the few whom, from their poverty or ignor-

ance, it does at first attract. The profession thus lacks continuity, efficiency, prestige. Nay, worse. Admission to the ranks of teachers being thrown open on free trade principles to all comers, and departure therefrom being necessary and advantageous in nearly all cases, teaching as a profession has no existence except in name. If men may come and men may go, the profession *cannot* go on for ever. In Madras the Educational Rules, requiring of all schools that seek recognition a certain proportion of technically qualified teachers, to some extent counteract this tendency. But their operation is extremely feeble, even trained L. T's often finding it profitable to change their line. Thus the art of teaching, being left without devoted adherents, makes slow progress in the land, and the teachers of first-rate eminence, not belonging to an older and happier generation, can be counted on one's fingers. And if teaching and teachers are in such a bad plight, the condition of the taught cannot be satisfactory. A serious indictment, but true.

What are the remedies for this undesirable state of things? Granted that attempts should be made to so organise the teaching profession that its members may take real interest and pride in their work, and that they may learn to feel and act together as members of one honourable calling bent upon advancing its higher interests and usefulness, what practical steps may be taken to secure these ends? First of all every person desiring to enter the ranks of secondary or primary teachers must be compelled to undergo a course of training in the science and art of education, which, while equipping him for the work he undertakes, will be some guarantee of his remaining long in the profession. The Viceroy has alluded to the subject of training colleges and schools, but it is doubtful whether the Conference will give it that importance that it deserves. Here in Madras, we seem to be slightly in advance of the other provinces in the extent to which technical qualifications are required of teachers; but even here the progress is neither so rapid nor so sure as it might well be. The depart-

ment which still retains the right of supervision over schools ought to bring moral pressure to bear on the management to provide an adequate scale of salaries to the teachers, and not as at present leave the matter to the destructive operation of economic laws. It is difficult to imagine what the department is good for, if it does not bend its whole energy and influence to the task of rendering the profession of teaching nearly as attractive as the other learned professions, so that it may absorb a proportion of the available talent commensurate to the important interests in its keeping. Lastly, the Government must devise or help to devise some substitute for a retiring pension to the large numbers of schoolmasters employed in non-governmental institutions. Liberal grants from State funds may be offered to managers who propose to organise retiring or provident funds for the teachers in their employ. It may be objected that in addition to these measures involving increased expense on the part of Government, they would also constitute undue interference with the freedom of managers and the spontaneous nature of their relations to teachers. And this objection may be reinforced by the consideration that as teachers themselves develop an idea of corporate feeling and action, they ought to be able to achieve their own amelioration. The facts, so far as they relate to Madras, entirely belie these expectations. Since the department retired from the management of schools, the emoluments, the efficiency, and the prestige of the schoolmasters have been steadily declining, private managers are not using their freedom to further the interests of the teachers under them or those of the profession in general, and the teachers themselves are more than ever unable to guard their privileges or interests. Outside sympathy and support they need sorely, and whence could they look for them if not from the Department of Education?

Other points in our system of education are sure to receive adequate attention from the Conference; indeed many have been mooted by Lord Curzon himself. But this question of the strengthening and amelioration of the teaching profession is at the bottom of the whole problem; without this reform every other reform is a delusion and a snare. Will some member of the Conference champion the cause?

V. S. SRINIVASAN.

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#### USES OF SAW-DUST.

**P**RACTICAL economy is carried very far in Europe and America, where scarcely any waste product of the mill or factory is now aimlessly thrown aside if the least possibility exists for its being put to a commercially advantageous use. Not having realised the importance or the necessity, we have not yet taught ourselves to go to such lengths in India, and so far from practical economy engaging respectful and profitable attention here, we suffer a great many of our most valuable commercial products to lie idle instead of turning them into undoubted sources of great wealth and usefulness. Sooner or later, however, as the struggle for industrial and commercial preminence becomes keener and more furious than it is now, and India, with her vast and unexploited natural resources, is dragged into the very vortex of the conflict, we shall be compelled to realise the desirability and even the necessity, of imitating the admirable enterprise of Western economists and industrialists. We are now doing not a little, it must be conceded, to develop the Indian timber trade, and saw-mills and timber depôts are springing up in various parts of India and Burma, while a brave and resolute effort is being put forth to compete with Europe, America, Australia and even Africa in parts of which last-named continent the timber industry has developed almost phenomenally. Just at present, it can hardly be said that, notwithstanding our many saw-mills and sawing yards, any considerable commercial use is made of the large accumulations of saw-dust that lie over, but we reckon the time will not be long in coming when the several valuable economic uses of this humble and now wasted substance will be turned to profit on an extensive commercial scale. Saw-dust, it may be mentioned at the outset, is not to be confounded, as some confound it, with wood pulp, which latter is wood torn into shreds and

then macerated until it becomes a pulp in which condition it is eminently suitable for paper and various other economic purposes. A recent statement shows that large trees are being extensively felled in North America, the wood being macerated into pulp for the purpose of manufacturing paper. Saw-dust, as its name clearly implies, is no more than the particles of refuse left after timber has been sawn. There is an impression that Indian saw-dust is ill-adapted for several purposes, because it is drier than the American or European substance, but we have it on the authority of an experienced timber merchant and steam saw-mill owner in this country that there is no reason why the Indian article should be drier than the European or American. Saw-dust is now-a-days extensively utilised for a good many purposes in Europe and America, and should serve for most such purposes in India also. They employ it largely in Germany for building needs, as a basis for concrete in place of stone. After being mixed with certain refuse mineral products, it is compressed into the form of bricks and these bricks have been proved to be very light, impervious to wet and absolutely fire-proof. Both in Europe and America, it is compressed and turned into roofing boards, being also made into xyolith or wood-stone, which is nothing more than saw-dust mixed with magnesia cement and saturated with chloride of calcium and afterwards subjected to a pressure of one thousand pounds to the square inch. Xyolith is a hard, inflammable substance, but can be sawn and manipulated generally like wood and it lends itself admirably to the manufacture of certain articles of furniture. It provides for an imitative industry which is capable of very great expansion. The announcement is just made that a German chemist has found means, by mixing saw-dust with certain chemicals, of producing a flooring, which is as hard and smooth as marble or concrete and yet elastic and warm to walk upon. It is fire-proof, impervious and sound-deadening and will not bulge or crack for years. It is laid down moist without seams and

hardens in 48 hours. It may not be generally known that as far back as ten years ago, another German chemist succeeded in extracting an excellent quality of brandy out of saw-dust, and just at present we hear of a process, invented by a Danish chemist, whereby saw-dust is being manufactured into a potent spirit. The method adopted consists in treating the saw-dust with dilute acid under pressure, by which the lignin is converted into sugar. Fermentation with yeast follows, alcohol is the result, and there, you have your grog. But a far more sensible use to which saw-dust is turned in Germany is for making wood-biscuits where-with horses are fed. Gum and sugar have also been extracted from saw-dust by the agency of sulphuric acid. The substance can furthermore be transformed into very good silk, cheap and durable, and a rough kind of paper too has been made from it, although it is doubtful if saw-dust paper would rise to be a great industry, seeing that the fibre of wood is destroyed in the process of sawing. In Canada, a fairly powerful gas has been extracted from saw-dust, which, therefore, possesses in addition, a potential value as a cheap illuminant. For many years past, saw-dust has been put to several simple and most advantageous uses. The ragdoll which our young folks play with is stuffed with it, and ice and oranges are the better and keep the longer for being packed in it. Mahogany saw-dust is excellent for smoking fish; box-wood saw-dust is the best thing for cleaning jewellery; and that of rose-wood for cleaning furs: in the cavalry barracks in England, the riding schools are floored with saw-dust mixed with tan in the proportion of one to three, while, added to refuse tar, this humble product constitutes a cheap and good fuel. Chilled saw-dust has been found as good as ice, and very much cheaper than it for packing fish. It makes an excellent manure, more especially for young trees, and every one has doubtless noticed with what luxuriance vegetation thrives on ground where sawyers had previously

been at work. In the Calicut Municipality, saw-dust, being a capital deodorant, is mixed with night-soil burnt in the incinerators and there can be no doubt that its presence improves the fertilising properties of the resultant manure which is sold at the rate of about 50 kerosine tins for the rupee. In this connection, it may be incidentally mentioned that in Scotland, they now have a system of using fresh sewage sludge as a manure by mixing it with peat which has been chopped fine and dried. By this treatment, the sludge is not only deodorised, but retains all the ammonia and phosphates which are of such precious value to the soil. Saw-dust makes an excellent filter when carbonised, and it is used in France to take away the unpleasant flavour peculiar to certain French wines. As a medical agent also, this product has its value, for, when saturated with a weak solution of carbolic acid and dried, it may be enclosed in soft muslin and used with the best results as an antiseptic pad for absorbing the discharge from wounds. Saw-dust is not altogether wasted by the natives of India. In Madras and other places, it is mixed with cowdung for making *bratties* or fuel-cakes and in Nellore, Kistna and elsewhere, it is prepared with much ingenuity into a coarse form of xyolith and then converted into dolls and other toys. Europeans in India use it largely as bedding for their horses and I believe if dogs are allowed to sleep on saw-dust, it will rid them of the fleas that are such a torment to their lives. Many poor natives stuff their own pillows with saw-dust. They also use it as an over-night-fuel, for it burns slowly and steadily and saves the trouble of making a fire in the morning. Ashes from an oven in which saw-dust is burnt are treated as very rich manure and are a marketable commodity. As our saw-mills increase and as accumulations of saw-dust offer difficulties in the way of disposal, we may be sure that the numerous economic uses to which this product can be applied will force themselves on the attention of our timber merchants and mill owners and lead to the establishment of new and profitable industries.

NORMAN RUTHVEN.

### The World of Books.

THE OXFORD BOOK OF ENGLISH VERSE:  
by A. T. Quiller Couch. (*Henry Froude, Clarendon Press, Oxford. Price 7/6.*)

In no way will it be partial to Mr. Quiller Couch to pronounce his anthology to be the most comprehensive and up-to-date in the field. We shall state the special features of this publication which claim for it a prominent place. First and the best reason: Mr. Quiller Couch has not succumbed to the unpardonable vanity of anthologists who, in their anxiety to be thoroughly original in their selection, have omitted some of the best specimens of English poetry just because they have been included in other anthologies. He has not been dissuaded by the common objection that all anthologies repeat one another; nor has he been perturbed that his judgment should often happen to agree with that of good critics. Recognising "that the best is the best though a hundred pages have declared it so," Mr. Quiller Couch has sought to embody in his collection all that is best and representative in English verse. The selections are cosmopolitan, and the compiler has not "sought in these islands only but wheresoever the Muse has followed the tongue which among living tongues she most delights to honor." The contents of the book are chiefly lyrical and epigrammatical. But Mr. Quiller Couch has not like some anthologists before him restricted his selection by a rigid definition of the lyric. Indeed he says "I am mistaken if a single epigram included fails to preserve at least some quaint thrill of the emotion through which it had to pass before the Muse's lips let it fall, with however exquisite deliberation. But the lyrical spirit is volatile and notoriously hard to bind with definitions; and seems to grow wilder with the years. With the anthologist—as with the fisherman who knows the fish at the end of his sea-line—the gift, if he have it, comes by sense, improved by practice. The definition, if he be clever enough to frame one, comes by after-thought. I don't know that it helps, and am sure that it may easily mislead." For this reason Mr. Quiller Couch has included many poems which others would have excluded as non-lyrical or perhaps anti-lyrical. As a result of this literary broad-mindedness, we have an excellent and delightful collection of English verse produced during a period of 650 years from 1250 to 1900. Lovers of English literature ought to be thankful to Mr. Quiller Couch for this publication and we hope with the author that the volume may be welcome not only to the lover of poetry but serve also to implant that love in some young minds not yet initiated.

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# TWENTIETH CENTURY INVENTIONS:—

A FORECAST, by George Sutherland, M. A.,  
(Longmans, Green & Co., Price 4/6.)

# ENGLAND'S NEGLECT OF SCIENCE by Professor John Perry, M. E., D. Sc., F. R. S. (T. Fisher Unwin, Price 1/.)

Of all men in the industrial and commercial world, the inventor is regarded as the most speculative. Indeed, it is usual to set down all who attempt to make inventions as fools and ridicule them. To mention only one instance, George Stephenson, to whom we owe the modern railway system, was condemned not a little by the experts of his day for his ideas about the 'travelling engine' and a scholarly critic, writing at the time in the *Quarterly Review* said: "What can be more palpably absurd and ridiculous than the prospect held out of locomotives travelling twice as fast as stage-coaches." In recent times, the merriment occasioned by the first proposals to affix pneumatic tyres to bicycles is a striking instance of the tendency, and in almost every 'bike' shop and factory in the United Kingdom and America, the suggestion of putting an air-filled hosepipe around each wheel of the machine to act as a tyre was received with shouts of ridicule.

There is, we must grant, some reason for the world's disfavour towards would-be-inventors generally. The majority of them are money-hunters and in their haste to get rich, they rush to the patent office without making sure that their invention is saleable. In the process of inventing itself, very little of "science" is pressed into service. This point is prominently adverted to by Professor John Perry in the papers which he has collected together under the title of *England's Neglect of Science*. In this book which is a protest against "the unscientific waste of the valuable youth of millions of our people" and which is intended to show what kind of reform is needed in the present system of English education, the Professor deplores the lack of that mental grasp of the general scientific principles underlying a work where the object is to improve existing things and the ways of using them. What has the machine to do, why should this particular part of it have this size, shape or strength, these are generally neglected questions. The first pattern is very often the evolution of constant "fitting and trying by quite unnecessary expenditure of money through trial and error. A machine is made and tried and then another better one until a good result is arrived at." As a writer on 'Inventing' humorously puts it in the July issue of the *Indian Import and Export Trades*

*Journal*, the majority of inventors make their mistakes in wood and metal which is dear instead of as much as possible on paper which is cheap.

Mr. Sutherland, therefore, should be prepared for a little adverse criticism of his 'Twentieth Century Inventions' as useless speculations. It is too much to expect that the mass of the world, given to what Tennyson calls 'the windy ways of men,' will appreciate his book, portions of which are highly technical. Yet it is clear that what would be a speculation in the case of a novice will lose all its grossness in the hands of an expert. The question is purely one of calculation of probabilities and the accuracy of the forecast depends on the knowledge of the speculator.

Mr. Sutherland claims that he "is fitted by training and opportunities for undertaking the necessarily difficult task of foretelling the trend of invention and industrial improvement during the twentieth century." His speculations cover a very large field. In the earlier chapters of the book, he discusses the possibilities of harnessing the natural agents, the tides and waves of the ocean, the sun and waterfalls, as sources for the generation of motive power. The principal forms of stored power, namely, the electric storage battery, compressed air and calcium carbide are next discussed as well as that most powerful agency in motors, the steam turbine. The revolutions in the means of locomotion, in agriculture, mining, in domestic appliances, electric messages, warfare, music, art and news are next referred to, and a chapter on 'invention and collectivism' closes the book.

How far the author's prophecy will prove correct, time alone can say. He admits that he must be wrong in a certain proportion of his prognostications; but like the meteorologists, he will be content if, in a fair percentage of his forecasts, it should be admitted that he has reasoned correctly according to the available data. Meanwhile let us remember that inventors and all who in any way aid them are entitled to respect and gratitude. They are the heroes and great men who have made civilisation what it is at the present day, and if we but take the lesson of the revolution effected by their genius, it is to them that the world must look for the relief of all economic distress. "Their life's work is to elevate humanity, and if mankind paid more attention to them and to what they are thinking and doing, instead of setting so much store by the veriest tittle-tattle of what is called political life, it would make much faster progress."

AS THE CHINESE SEE US, by Thomas G. Selby: (T. Fisher Unwin, London.)

Mr. Selby's book is a book of the hour, and fills a gap which has long been left unfilled. There are not wanting books on the Chinese problem and quite recently we have had a number of them, but none gave us the Chinese view of the problems as exactly as the book before us does. The method of treatment is thoroughly oriental. The author introduces appropriate characters from among the Chinese as well as from among the Westerns who hold a spirited discussion on the pressing problems of China down to the results of the Western diplomacy in the Boxer imbroglio. It may not be quite impossible to read the author's mind in the book but it would tax all the ingenuity of the reader to find out what it is, from the conversation of the various characters. The dialogues are conducted so cleverly that one would think that men in real life are holding the discussion. The first topic is "International Antipathies." Vice Consul West interrogates Pandit Tung.—

"Why should your countrymen dislike us even when they receive kindness at our hands?"

Pandit Tung replies.—

"The dislike is a tradition of our training. Perhaps the attitude towards us into which you are trained does not rest upon a true and just appreciation."

With the Westerns woman is an important social factor. Vice Consul West remarks.

"Perhaps one of the reasons why foreigners are not attracted to Chinese society is that it represents one half of human life only."

Pandit Tung observes in reply.—

"The coarse manners of some of the foreigners do not incline us to make changes in our social life. Some of them at least have never learned the proprieties, and think themselves honest when they are only rude, and amusing when they are viciously familiar. Not many years ago one of our Chinese ministers was returning with his retinue from Europe, and a merchant's clerk on board chucked the female attendant of His Excellency's wife under the chin, and called her handsome fairy! A Chinaman who would dare to offer such an insult to a waiting-maid here would be knived on the spot. When such things are rumoured abroad we ask, 'Are Western manners like this?' Do not be surprised that we are jealous and inaccessible."

But such looseness is against Western etiquette, no less. Pandit Tung contends that Chinese rules are better, particularly where women are concerned. He observes naively:—

"It is forbidden us to touch a woman's hand, a restriction, Mencius, of course, allows to be broken if a woman has stumbled into a well, and needs to be pulled out. But in foreign life women seem to be always in wells, judging by the constant need they have of being helped. Our distant manners make for domestic morality, and however bad we may be in some things, seductions, illegitimate births, and public divorces are fewer than with you. Foot-binding may be as wanting in pitifulness as

you assert, yet we think it better than the promiscuous dancing of under-dressed women, which is practised at some of the Legations and Consulates, as well as in the merchants' 'hongs'."

Sins which the Western nations have committed in the name of "free trade" are many. China is an unwilling victim to them. Every Chinaman understands their true character and what value is attached to them by Western nations themselves. Chinese political economy to-day is that of the Grand Vizier who three thousand years ago advised King Mò of the Chau dynasty not to accept a present of hounds sent by one of the tribes of the West lest home industries would thereby be neglected. Free trade is against Chinese history and institutions. Pandit Tung turns the table on the Westerns when he says to Vice Consul West:—

"The children and grand children in your own colonies have neither the doctrine of the larger humanity nor a true sense of continuous clanship, for they make tariffs against even their own fatherland, if the newspapers do not mislead us."

But all the same, the free trade in China rests upon treaties which are inviolable and to which the Westerns hold fast as a man cast in the sea would to a life-boat. Under such circumstances it is impossible that any Chinaman would enter with any great degree of good-will into relations which have been thrust upon him. He suffers the foreigners to exist in his country from fear of war, as the Chinese farmer suffers loathsome snakes to exist in his granary to avoid rats.

In point of ethics, the Chinaman thinks that his is the best and on that account refuses to receive instruction "from a barbarian." What strikes him most curious and inexplicable is the different treatment accorded by Westerns to their wives of their own nationality and those of Chinese extraction. Chu Tip Kay observes:

"Every foreign wife has the power and state of an empress and her husband and his friends run after her palanquin and bow at her nod as though they were court attendants. But when a Chinese woman fills that place in a foreigner's home, for a time, she is secretly cherished, publicly ignored, and at last flung back upon the street in a way no female slave would be dealt with in a Chinese household. Our countrymen who have had sons by foreign women always bring them back home and get them incorporated into their clans."

The Emperor of China respects the three old religions of his Empire, Confucianism, Taoism, and Buddhism equally. The people find what they need in one or other of these sects.

"What is amiss with the three old religions?" asks Cheung Sz Ye to which John Smith replies.—

"The evil of the situation is this, that the common people and the women follow superstitions at which the educated laugh and the educated themselves do not believe in the



more spiritual elements in the Confucian books. If the educated laugh at the religious beliefs of the uneducated it is impossible for any form of worship to enlist reverence and uplift the character."

Chung Sz Ye returns with an answer which is at once sensible and overwhelming.—

"I do not see how you are to improve matters by giving us the religion of Jesus. The faith of missionaries is sometimes laughed at by Consuls and Assistant Consuls, as well as by Englishmen engaged in newspaper work. Did not Confucius say that true wisdom consists in being sensible of the limitations of one's own knowledge."

The Chinese have their own ideas of "Imperialism" which has become a "Fetich" with the neo-politicians of England. Their ideas are based upon the saying of Confucius. "He who rules by virtue is like the pole-star which keeps its position in the heavens whilst all the stars turn to it." In this matter the new imperialists can very well take a lesson from the Chinese Imperialist who seems to know the defects of the new imperialism of the West. Wong Chin Yeung observes as follows :—

"That martial force should be needful and that the bill of costs for its hire and equipment should increase every year, seems to show that in both the eastern and the western worlds rulers have lacked the moral influence which goes with high character. We are right in putting the happiest epoch of the race in the time of the early kings, and you are wrong in speaking of it as yet to come, for it steadily recedes. Perhaps a ruler may one day arise who will trust in the maxims of our sages and make an empire cohere through moral rather than through military force. No limit need be put to the extension of such an empire. Among Western races, where clan and family communism count for so little, it will always be necessary to repel violent attacks upon property by violence. Property is safe when the man who owns it, owns it for the benefit of his kinsmen and their cognate families. According to our view of things, the empire which will never go to pieces, however large it may grow, is the empire which is bound together by moral sympathies. The empire is already too large if the ruler cannot conciliate his own subjects, and to feed the soldiers who guard and enlarge it, multitudes are compelled to live in hunger and degradation. As Mencius said there is no difference between killing men with a stick, a sword, or the style of Government."

The last two chapters of the book which are devoted mainly to a consideration of the Boxer rising and the treaties by which it ended are most interesting. If we are to do full justice to the subject here, we shall have to re-write the chapters dealing with the questions. If what has been said on behalf of the Chinaman had been really spoken by the Chinaman himself, it would be most creditable to his debating powers. We can only give a sample of them here. Of the Boxer story, one half has been told us by the Western, the Chinese half has yet to be heard. Wong Chin Yeung, one of the Chinese characters, relates his half of the story in this wise, to a representative English character.

"The different Powers have been all allied in one campaign and you can no more expect our ignorant peasants and drivers and barrow-men to distinguish between different nations than you can expect them to know one requirement from another. The rapes followed by slaying, which have been many, will be a common dishonor to the Governments of the West. Russia, France, Germany you speak of as Christian Powers, but in some cases they have shot the very converts they had gone to protect, and have failed to shoot real offenders. We could not have done worse than that. Your lack of discrimination is as fateful as ours. Patriotism expresses itself in acts of piracy, the adultery which is punishable with death becomes a venial revenge when it is committed beneath the regimental colors and the most ruffianly burglar is decorated by his country with the largest number of medals. Such things are counted to soldiers for righteousness when war has once been declared. The Japanese behaved with more restraint and gentleness than any of the European powers and the Japanese are not Christians."

Even Christians may learn something from the Chinese. Confucius said "Let a good man teach the people for seven years, and they may then be safely employed in war." Wong Chin Yeung says that if fighting is to be done at all, it should be done by men of the highest character.

It goes without saying that the outcome of the Western diplomacy in Boxer imbroglio has not given universal satisfaction in the West. More missionaries suffered by the rising than the Consuls; but yet the treaties conferred more advantages to the merchant than to the missionary.

Yan, a native catechist, is made to say as follows with reference to the treaties :—

"To condone the wholesale murder of missionaries and ask new trading faculties as reward for the indulgence extended towards an enormous crime, is the worst form of bribery, and can only expose Christian countries to the contempt of the heathen. Such a policy would do much to prove the justice of the allegations urged against the nations of the West, and especially, against England, that greed is the only motive which guides the administration of Government."

We can imagine that feelings of the Western missionaries in this respect are not quite different. Although we make no difference between a merchant and a missionary a real difference exists among them in interests, thoughts and feelings.

*The Brahmavadin Press* has done well in giving a permanent shape to the interesting discourse on "The Philosophy of Theism," delivered sometime before his death by the Hon. Mr. Justice Ranade before the students of the Wilson College, Bombay. Two editorials that appeared in the *Brahmavadin* criticising Mr. Ranade's lecture are also reprinted. The lecture deserves to be studied on its own intrinsic merits. It once more reminds us of the great loss which the country has sustained in the death of this versatile scholar.

**MALABAR AND ITS FOLK**,—by T. K. Gopal Panikkar, B.A., with an introduction by the Rev. F. W. Kellett, M.A. (Price One Rupee. G. A. Natesan & Co., Esplanade, Madras.)

**NAYARS OF MALABAR**,—MADRAS GOVERNMENT MUSEUM BULLETIN, VOL. III, NO. 3. by F. Fawcett. (Price One Rupee Eight Annas. Government Press, Madras.)

These are two very interesting books upon Malabar and its peculiar people which redound to the credit of their respective authors. Despite the fact that they both treat of the same subject and agree in many respects, there is a notable contrast between the standpoints from which they view it. The one is a native of the country of whose people he writes and for whose social and political elevation he, as an educated man, longs. To him, therefore, such old world customs of marriage and other aspects of social life as impede the onward march of society must give place to newer and healthier ones which could better receive the modern impulses of reform and progress. But the other looks at the people not only with the curious eye of the anthropologist but also as one who has seen much of the complications of modern civilised life. Hence, he feels that the self-same customs ought not to fleet away before the new-fangled notions of what he considers to be, the half-educated populace. Thus, we ought not to be surprised if, while the one feels that the Malabar Marriage Act is a step in the right direction, the other should feel that it—the 'Edict' as he sarcastically styles it—is surely a mistake. That the truth lies midway between these two extremes we need hardly so much as state. One neither wishes for revolutionary changes nor is ever satisfied with stationariness. Yet, it must be confessed, the very diversity in their standpoints gives point to the discussion and makes it more fruitful than ever.

Mr. Gopal Panikkar possesses powers of accurate observation of men and things and of expressing himself in clear language and has turned them to good advantage in these essays before us.

He begins with two introductory chapters entitled "Thoughts on Malabar" and "A Malabar Nair Tarawad." Then follows one on the "Marumakkathayam System" which contains a fruitful discussion as to its origin, a summary of the evils it has wrought in Nayar society. The next essay on 'Local Traditions and Superstitions' is a notable one, for it records many current popular beliefs of the Nayars. After a well-written chapter on 'the origin and progress of the Malabar Drama,' we have a brief sketch of the most important Malabar festival, the 'Onam,' succeeded by similar ones on two other lesser-known festivals. Then we are treated to a well

written dissertation on Feudalism in Malabar and its present day relics, which shows that Feudalism is a state of society which presents itself whenever and wherever certain conditions exist and should not be thought of as peculiar solely to Europe, thus lending support to Col. Todd's theory of Rajput Feudalism upon which much undue odium has hitherto been poured. This is followed by a description of the nauseating 'Cock Festival at Cranganore.' In another chapter the author has a rocket-like attack on the opponents of the Malabar Marriage Act. Then we come to the most delightful essay in the whole book and it is the one on 'Serpent Worship in Malabar' which by the way tells us that "the family-serpent is in old deeds the subject matter of sale."

The succeeding chapter on "Some depressed classes of Malabar" is the one that would most interest the pure ethnologist. But one may dissent from Mr. Panikkar when he says that "these people constitute our unquestionable aborigines." The next paper is headed "Village Life." We do not understand what exactly the author means by it. Baden Powell and others hold that unlike other parts of the presidency, the west coast has no village groups either of the ryotwari or of the joint village type. Thence we come to the last chapter and it is on "Religious Life" which exhibits a strange medley of Dravidian and Indo-Aryan belief.

The chapter on Nair Tarawad needs recasting for, as it stands, it is desultory; the one on village life needs looking into and finally we would like to have a chapter on Pollution in Malabar, which so much characterises Nair society but which has never been satisfactorily explained, though Mr. Panikkar himself refers to it many times. Yet, even as it is, the book affords delightful reading and as Mr. Kellett says "Mr. Panikkar has deserved well of sociologists in setting down in black and white a description of Malabar customs" which Western culture is sweeping away.

We now come to Mr. Fawcett's book. He practically begins by a consideration of the physical measurements of the Nayars. He gives three separate sets of measurements: one, for the Nayars as a whole; another only for the exogamous clans and a third for eight different clans, each separately. He draws no general conclusion from these measurements as to the racial origins of the Nayars. He simply says it is not yet time to say whether they are or are not Dravidians.

With regard to marriage Mr. Fawcett refers to the rule of Anulomam and Pratilomam that is observed with the utmost strictness and thoroughness. It is the custom which permits the woman

to unite herself with a man, her equal or superior in caste, but never with an inferior and remarks that "the custom is one which makes for the improvement of the race." He combats the view underlying the Malabar Marriage Act that there is no such thing as marriage among the Nayars and says this "reminds one of the weary disquisition by people who are dull enough to try and prove that Shakespeare's plays were not written by Shakespeare but by another fellow of the same name." He holds that "the Sambandham, is a regularly formed, and certainly not haphazard alliance between a man and a woman, having the full sanction of the community, and is therefore marriage in every sense of the word."

On the subject of serpent worship we have a long quotation from Mr. Panikkar's "capital little book" as he calls it.

Then there is a very interesting account of the Onam followed by accounts of the lesser known festivals of Vishu and Thiruvathira extracted from Mr. Panikkar's book.

On the subject of "Astrology, Magic, Witchcraft" Mr. Fawcett has some very notable things to say. Magic is, as a rule, for good: never for harm and is believed in by every Nayar through and through however educated he may be, which only proves that he is truly human. Malabar is the place for black magic and is practised by the Odiyans, who are named after their cult which is called *Odi*, a very valuable account of which is given jointly by Messrs. Fawcett and Balakrishna Nayar.

After sundry notes on the subduing of evil and beneficent spirits, we have a readable account of the three famous magicians of Malabar which brings this solid addition to our knowledge of South Indian anthropology to a close.

#### AN OUTLINE HISTORY OF THE BRITISH EMPIRE, by William Harrison Woodward. (Cambridge University Press.)

This is an abridged edition of the author's *Short History of the Expansion of the British Empire* published about ten years ago. The two great geographical discoveries which mark the close of the fifteenth century, those of America in 1492 and of the Cape route to India in 1498 constitute the natural starting point of the author's narration of the growth of the British Empire. The events that led up to the gradual building up of the Empire are told briefly and succinctly and we note that unlike in other publications of this kind, a decent space is given to India. We expect the book will be found useful by students who go up for the history branch of the B. A. Degree of the Indian Universities.

#### HANDBOOK ON DUCKS AND GEESE, by Isa Tweed (Price Rs. 3-8 : Messrs. Thacker Spink & Co., Calcutta.)

Mrs. Isa Tweed, is one of the foremost authorities in this country on all subjects connected with farm live stock. Her Indian hand-books on this subject take the place of Lewis Wright's books on the same subject in England. Some years ago she published through the same firm hand-books on "Cow-keeping in India" and "Poultry-keeping in India" both of which have attained much popularity. She now follows them up with another book on some subsidiary farm stock such as ducks, geese, turkeys, guinea-fowls, pigeons, rabbits &c., giving much useful information regarding the rearing and keeping of these birds and animals with a view to profit. The book is illustrated which certainly helps in distinguishing varieties of the same species. Its price is not very moderate it is true; but it is well within the means of planters and other Anglo-Indians who are removed from large towns and who by keeping poultry runs and pigeon lofts &c., desire to add to exceedingly meagre supplies of local markets and shandies.

#### Books Received.

- W. B. CLIVE :—  
A Manual of Psychology by G. F. Stout, M.A. .... 8/6
- THE SCIENTIFIC PRESS LD.—  
Burdett's Hospitals and Charities 1901 ... 5/
- B. L. SEN & CO., CALCUTTA :—  
The Materia Medica of the Hindus by N. C. Dutt.
- THE UNIVERSITY TUTORIAL PRESS :—  
The Tutorial Algebra, Part I, Elementary Course by R. Deakin M.A.  
Deductions in Euclid by T.W. Edmondson, M.A.
- GEORGE BELL & SONS :—  
Ever Mohun by Fred. T. Jane.  
Penelope's Irish Experiences, by Kate Douglas Wiggin.  
Our Friend, the Charlatan, by George Gissing.
- GOVERNMENT PRESS, MADRAS :—  
Catalogue of the Prehistoric Antiquities, by R. Bruce Foote, F.G.S.
- SWAN SONNENSCHREIN & CO.—  
The Mause Gate, by "Tubal Cain" ... 6/
- THOMSON & CO.—  
Indian Social Reform, edited by C.Y. Chintamani.  
Bharata Saram or the Essence of the Mahabharata in Tamil : by K. Kuppusami Mudaliar, B. A.
- DAWBARN & WARD LTD :—  
Amateur Curating : ... 6d/
- GEORGE REDWAY, LONDON :—  
Leisure Intervals, by W. C. Hazlitt.
- THE ANANDA PRESS, MADRAS :—  
A Sketch of the Life of Dr. Miller, in Telugu. by Sri K. R. V. Krishna Raw Bahadur B.A., Zemindar of Polavaram.

## Topics from Periodicals.

DR. E. J. DILLON.

Mr. Stead writes, from personal friendship, a very pleasant and readable character-sketch of Dr. Dillon in the *Review of Reviews* for July. Doubtless most of our readers are aware that Dr. Dillon is the ablest and far and away the most remarkable journalist on the English Press. But it is well that the man of all men well-fitted to intelligently introduce the great men of our time to the rising generation has given us a vivid picture of the career and character of that great and varied personality.

DR. DILLON AT SCHOOL.

Emile Joseph Dillon was born in the fifties in Ireland. He got his early schooling in Dublin where he was a quick scholar. Young Dillon no sooner attained his teens than he seemed possessed by a wander-demon which drove him hither and thither across the face of the world. His first flight abroad was taken to France where he studied in various educational establishments and frequented lectures at the College de France. Under the celebrated Renan he devoted himself to Semitic languages, especially Hebrew poetry and Carthaginian inscriptions. He then left for Innsburg where he attended lectures on philology, theology, historical criticism, and philosophy. Subsequently he went to the universities of Leipzig and Tubingen where he spent two and a half years in studying comparative philology and added Persian to the other languages he was mastering. He next went to St. Petersburg where he entered himself in the Oriental Faculty and added to his other studies Zend and Ancient Persian. He left St. Petersburg to study Zend at Louvain where he took the degree of Doctor of Oriental Languages and Literature and subsequently in Petersburg the Russian Degree of Master of Oriental Languages, a "bitter examination."

HIS DEBUT ON THE PRESS.

Dr. Dillon began his journalistic career by writing to a Russian paper, now in the hands of Prince Uktomsky, a critical study of the first two volumes of a history of universal literature brought out by some Russian professors. His dissertation on the place of the Armenian language in the family of Indo-European tongues brought him the honor of Doctor of Comparative Philology. Dr. Dillon is the author of several scientific and literary works in the Russian tongue. In 1885 he founded together with Professor de Harlez, a scientific and literary review in French entitled *Lé*

*Museon* for which he worked very hard. In journalism Dr. Dillon considers:—

Scientific accuracy in dealing with facts, great rapidity in working and absolute discretion towards informants as the qualities which ensure success. Above all things be as silent as the tomb about information which was not given to you for publication and do nothing calculated to shake the confidence of those who, forgetting that you are a journalist, only remember that you are a gentleman.

IN ODESSA.

In 1888 he went to Odessa as the Foreign Editor of the *Odessa Messenger* and was soon after enticed away by a better offer from the *Odessa News*. He wrote occasionally to the *Pall Mall Gazette* and for the *St. James's* and made his mark by writing the famous series of articles in the *Fortnightly Review* over the pseudonym "E. B. Lanin." His articles in the *Contemporary Review* are many. Leaving out of account his contributions to the press, his notable achievements were, firstly his special correspondence from Armenia in 1894-95, secondly his correspondence from Spain on the eve of the Spanish-American War, thirdly his letters from Crete, fourthly the Dreyfus case and fifthly his expedition to China last year.

Dr. Dillon's experience in China was probably the hardest piece of work from the point of view of physical fatigue and danger to limb. The following account of his sensations of agony while in peril by flood are never to be forgotten:—

He was thirty-six hours on the river Peiho, between Tientsin and Peking, without food or water, under the blazing sun, and to keep the balance even, he was caught by a tow rope and jerked into the river. As he wore his Russian heavy cloak or *burka*, he was unable to swim. He sank once, and then sank a second time, and coming to the surface was happily seized by a coolie, who hung on to his hand for a time, but ultimately it slipped from his grasp. Fortunately, just at that moment another coolie caught him by the wrist and pulled him out of the water. The second time, when he came to the top and was grasped by the coolie, he said he suffered the torments of hell in the minute during which he felt the grasp of the coolie gradually loosening and hand slipping slowly from the grip of his would-be saviour.

Courage is not the only special distinction of his career, and to say that he is courageous is to say little. What is, indeed, more characteristic of him is that he has been able to assume almost any disguise he pleases. This is best illustrated in the following episode in Crete, where he joined the insurgents, disguised as a monk, described by himself:—

In order not to be known, I dressed as a monk, and I was very anxious not to come in contact with any of the representatives of the Powers in that dress; but unfortunately the Italian Admiral called to us one Sunday morning when we were in a boat on the bay, and said he

wanted to talk to us about the whole question; he and the Austrian Admiral had a long talk with us, and I was the spokesman. Admiral Canevaro took my gun from me. We went down and had a cup of coffee with him very amiably. I refused autonomy in the name of the Cretans and stood up for annexation. As I was going away Canevaro told me he was very fond of clergymen and monks, and as he stooped down to give me my rifle I gave him my blessing as devoutly as I knew how.

The same special ability was manifested in his adventures in Armenia. His visit to the scene of the atrocities was absolutely forbidden by the Sultan. Undaunted by the difficulties in going there, he made secret preparations to cross the mountains and get into the city, but he found it unnecessary to employ them, for, he says:—

Before the time had come for shipping away unobserved, I succeeded in a very amusing but quite legitimate way in setting out openly for Armenia, and being taken for a Cossack officer, was received by the Turks on the frontiers with military honours, by Armenian women with male-dictions, and I finally reached Ezeroum without mishap. My arrival in that city gave rise to the most alarming reports. I was sent for by the Governor, who had before him a long telegram from Constantinople; my name was there in Turkish, and he nearly dropped his cigarette when he found that that name was mine. He asked me when I was going away. I replied that I was not going to hurry. Sir Philip Currie was then asked by the head of the Turkish Government to send me out of the country. Of course he refused. I stayed in Armenia, going out at night disguised sometimes as a woman, sometimes as a Kurdish chief. Generally I went along the roofs of the buildings, descended into the house of an Armenian family who would be expecting me, and then sallied forth in search of Armenian refugees whose relatives and friends had been killed. I sent them to the Commission at Moosh and forwarded their depositions to the *Daily Telegraph* as well.

There was one Kurdish chief who was said to have perpetrated unparalleled atrocities. But many Europeans disbelieved these tales. I looked out for this man, and found that he had been taken prisoner and was under sentence of death for having attacked the Turkish post and insulted the wife of a Turkish colonel. I wanted to get hold of this man and to get his depositions. I made several efforts to communicate with him, but it was exceedingly difficult, so I bribed the head of the prison to give him to me for about two hours. At the last moment word came that I had given him too little, and that the danger was too great; but if I would offer him more money and two hostages, the Kurd would come. I did so, and he came. I kept the Kurdish chief there all night, for I was afraid that people would not believe I had seen him, and in the morning I got myself photographed with him. It was on the basis of his depositions that Gladstone made his speech at Chester, and challenged the Ottoman Government to deny the statements there made. I had now and then to see Armenians in Turkish houses, disguised. In one of those houses they must have known who I was, because the coffee (of which happily I drank very little) was poisoned. I fell ill after drinking it, and I was about three weeks in a dangerous condition there. My servant was also poisoned, but he did not die either. I was several times warned that I should not be allowed to leave the country alive, and

some of these monitions were official. But I returned into civilization without serious mishap, though not without adventures.

In this brief summary of Dr. Dillon's career we have formed some conception of the extraordinary mastery he has attained of languages; we are assured that he is the only man on the English Press who is capable of writing leading articles with equal facility in English, French, German, and Russian. It is inspiring to recount his career as a journalist. We have realised the manner of man he is as a correspondent and the price he paid to gain his reputation as such. He has staked his life again and again to expose the track of contemporary events. The future of such a man is naturally a subject for speculation. We are told he has had more than one warning as to the dangers of the exposure and hardship of the career he had made his own. We can only hope that whatever place he may visit, no mischance will happen to him, for no one on the English Press "can wield a pen so luminous, so lucid and so learned," nor should we have in any other writer such rare combination of tastes and abilities, a student who is profoundly versed in the literature of Asia and Europe, who nevertheless earns his daily bread by contributions to the Press, "an artist in temperament, a journalist by instinct and a scholar and philosopher by choice, a statesman in ambition."

The July number of the *Asiatic Quarterly Review* contains four papers of special interest to India. Mr. J. D. Rees's paper on Famine Facts and Fallacies is given the place of honor and he pins his faith to the resolution recorded by the Manchester Chamber of Commerce that the whole question of the possible improvement of the economic condition of the poorer classes of the people in India may be safely left in the hands of the Indian Government. Mr. L. C. Innes in the course of an article on the "Prevention of Famine in India" declares that among the several schemes put forward from time to time for the prevention of famine in India, reforestation should certainly occupy a prominent place. Mr. Innes admits the beneficent influence of irrigation but endeavors to prove, that where it fails, reforestation would bring about the desired result. A forest of pines 150 miles in length and from 2 to 6 ft broad has been raised from seed within the last 110 years and so no time should be lost in initiating the necessary measures. Mr. Thorburn writing under the title of "*Agriicola Redivivus*" describes what is being done to revive and encourage the cultivation of land in India. "An old Punjabi" writes on "The Indian Borderland."

## WOMAN'S PLACE IN HINDU RELIGION.

The *Brahmavadin* for July reproduces an excellent address delivered at New York by Swami Abhedananda of the Ramakrishna mission on the position of woman in Hindu religion. It is an able survey of the rights of the Indian womanhood from the Vedic down to the latest period of Hindu literature and history, and furnishes the most complete answer to those who accuse Hinduism of having denied the dignity and moral worth of woman and of having reduced her to a mere instrument of pleasure and passive obedience. The learned Swami makes out by an unassailable array of authorities that the idea of the equality of man and woman is the corner-stone of that huge structure of religion and ethics among the Hindus which has stood for so many ages the ravages of time and change, and defied the onslaughts of the short-sighted critics of the world. Long before the civil laws of the Romans, which form the foundation for the legislation of Europe and America, were codified by Justinian, nay, many centuries before Moses appeared as the law-giver of the Semitic tribes, the Vedas and the Code of Manu proclaimed the equality of the sexes in their domestic, social and religious rights. The Rig Veda (Book V. Hymn 61, verse 87) as interpreted by an ancient commentator lays down: "The wife and husband, being the equal halves of one substance, are equal in every respect; therefore both should join and take equal part in all work, religious and secular." We also find in the Rig Veda the names of many inspired women who attained to the realisation of the highest spiritual truths. These inspired women are recognised by all classes as Seers of Truth, as spiritual instructors, divine speakers, and revealers equally with the inspired men of Vedic hymns. It is a special injunction of the Vedas that no married man shall perform any religious rite, ceremony or sacrifice without being joined in it by his wife; should he do so, his work will be incomplete and half-finished, and he will not get the full results, thereof, because the wife is a partner in the spiritual life of her husband, a *Sahadharmini*, spiritual help-mate.

Coming down from the Vedic period to the time when Puranas and Epics were written, we find an equally grand conception of the dignity of woman. Sita, the heroine of Ramayana, was the ideal wife, the ideal mother, and the ideal queen. She was the embodiment of purity, chastity and kindness. She still stands as the perfect type of ideal womanhood in the hearts of Hindu women of all castes and creeds. There is not a Hindu woman whose earliest and tenderest recollections

do not cling round the story of Sita's sufferings, and Sita's faithfulness, told in the nursery, taught in the family circle, remembered and cherished throughout life. The Mahabharata defines a wife as "half the man, his true friend." "A loving wife is a perpetual spring of virtue, pleasure and wealth: a faithful wife is his best aid in seeking heavenly bliss! "She is a companion in solitude, a father in advice, a mother in all seasons of distress and a rest in passing through life's wilderness." "A woman's body," says Manu, the law-giver, "must not be struck hard even with a flower, because it is sacred." "The mouth of a woman is always pure" "Women must be honoured and adored by their fathers, husbands, brothers, and brothers-in-law, who desire their own welfare." "Where women are honoured, there the Devas (Gods) are pleased, but where they are dishonoured, no sacred rite yields rewards." "Man is strength, woman is beauty; he is the reason that governs and she is the wisdom that moderates." "The tears of woman call down the fire of women on those who make them flow." The exceptional rights to property accorded to Western women under the recent Parliamentary enactments have been enjoyed by the Hindu women from time immemorial. In the absence of direct male heirs, widows succeed to a life interest in real, and absolute interest in personal property. The daughters inherit absolutely. Where there are sons, mothers and daughters are entitled to shares, and wives hold peculiar property from a variety of sources, over which a husband has no control, during their lives and which descends to their own heirs, with a preference to females. Such is the position of women according to the Hindu system and Swami Abhedananda has done good service in bringing it prominently to the notice of his American friends.

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In this connection we may invite the attention of our readers to a paper on "The Ideal of Womanhood" contributed to the September number of the *Indian Ladies' Magazine* by Prof. K. Sundararaman M.A., The professor warns the Hindu social reformer from falling in undue love with the Western ideal of womanhood. It is not in the least a matter for regret that we cannot produce women of the type of Mrs. Besant. He says:—

Women's proper sphere of duty is the home, and it is quite enough if they have the knowledge and training needed for making the home a temple of purity and peace; and our Aryan women in all well-ordered Hindu homes, have quite enough, of both. Hindu society contains more Sitas and Savitries than any other, and we do not want women of the type of Mrs. Besant.

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## POVERTY &amp; SOCIAL DECAY.

The July number of the *Arena* is chiefly notable for a collection of suggestive and timely articles of high merit. A contribution to that number that will be appreciated by all sympathetic readers is that on the above subject by Mr. Colwick. This writer, in his strikingly trenchant remarks on the relation of poverty to social decay, places a vigorous finger upon the real source of most of our crime and degeneracy. He describes a condition that must, sooner or later, attract the attention of statesmen. Believer, as he is, in the truth that the development of man's mental, moral and spiritual nature is largely dependant upon his material prosperity, he expresses the opinion that one cannot reserve a healthy, vigorous development and activity of mind, when one is harassed by long hours, short wages, and uncertain tenure of employment, adding that every period of "hard times" is marked by an increase of immorality and crime "particularly of those offences by which wealth is to be won." As regards the immediate causes of poverty Mr. Colwick's judgment is upon the basis of the moral and mental condition of the individual. To attribute most cases of poverty to either indolence or intemperance—laziness or liquor—is, he says, to add insult to injury. He contradicts the charge of indolence by the fact that wealth has increased four times as fast as population during the last decade; that of intemperance by the fact that consumption of malt liquors is steadily declining relatively to population. It is admitted, he says, that :—

"Many cases of poverty are due to drunkenness; but more cases of drunkenness are due to poverty. Man is a gregarious creature and, if out of work, how natural to seek rest, recreation and good "cheer" at the "poor man's club," the saloon! Lack of wholesome food, the depressing weariness of monotonous drudgery and the exhaustion produced by excessive toil frequently beget a feverish craving for alcoholic stimulants."

In support of the contention that moral improvement has not kept pace with mechanical and industrial progress, our author spices his arguments with illustrations which would lose interest by compression for the purposes of a summary here. He further draws upon English, American and Australian history for examples of the beneficent influences of favourable environments upon human character and conduct. Briefly put, his conclusion seems to be that poverty is the active missionary of sorrow and sin. In regard to the much discussed question as to the deterrent effects of racks, gibbets, torture chambers, and lynchings he says :—

Collective homicide and a rigorous criminal code, by presenting public examples of cruelty and hatred

often seem to operate as active inciting causes of new crimes. Long or frequent mental contemplation of brutality and viciousness tends to make us more brutal and vicious."

As for prisons the demand of the writer is the demand of the humanitarian viz., that they should be converted into reformatories for the reclamation of the criminal through kind treatment, the aim being to reform. In the efficacy of religious training and exhortation, Mr. Colwick has evidently no faith and quotes the conclusion of such ultra-orthodox workers as the Rev Charles Loring Grace, F. E. Willard, Gen. Booth who after years of varied experience found no escape from the conclusion that :—

Even though the land were as thickly strewn with religious tracts as leaves in Vallambrosa, and though vaster armies of theologians portray in most vivid colors the divine bliss in store for the fortunate few in the sweet by-and-by, yet, —while the rapt contemplation of post-mortem happiness in a land flowing with milk and honey perchance may momentarily dispel the bitter consciousness of present material needs,—so far as rescuing humanity from real earthly ills is concerned, these technical orthodox methods are little more than absurd attempts to nullify the law of cause and effect by undertaking the impossible task of suppressing natural consequences—suppressing vice and crime while sustaining crime-incubating social conditions. They finally acknowledge the futility of persisting, Mrs. Patterington-like, in an attempt to sweep back the rising tide of social decay with a lot of ancient theological brooms. This lesson many good, pious, well-meaning folks have yet to learn.

To this is added the testimony of the Hon. Horace Seymour who said :—

"After listening to thousands of prayers for pardon I can scarcely recall a case where I did not feel that I might have fallen as my fellow-man has done if I had been subject to the same demoralizing influences and pressed by the same temptations."

In other words, instructions in religion, ethics, admonitory homilies on the various vices and virtues fall upon deaf ears so long as poverty and ignominy prevail. Mr. Colwick makes no attempt, however, to propose remedies, but calmly tells us :

When poverty stares you in the face—when the gruesome fear of impending poverty haunts your slumbers and your waking hours; when your children are forced to grow up half clad, and less than half educated—then will you realize what maddening temptations assail the poor. The devoted mother who sees a tear in the eye of her hungry babe will barter body and soul to place her darling above the fear of want.

Such is the influence of an empty stomach upon ethics and *vice versa*. And the moral that must occur to the placid minds of moral mentors of society is that a hungry and ragged person is more likely to steal than one well-dressed and well-fed, and that a good "square-meal" will do a hungry man more good than half a dozen sermons upon the virtues of honesty and contentment.

## SRI KRISHNA.

In the August number of the *Central Hindu College Magazine*, Mrs. Beasant gives a further instalment of her paper on Sri Krishna. One of the accusations brought against this great *avatar* is that He led people into wrong actions.

One favourite instance is taken from the *Mahabharata*; the case in which Yudhishtira told a lie.—

The battle had been raging furiously on Kurukshetra for fourteen days, and on the fifteenth day there was a fierce fight between Arjuna, the son of Pandu, and Drona his old preceptor. Neither could gain any advantage over the other, and they finally drew away from each other, and charged in other directions, each carrying all before him. Then Shri Krishna advised that some one should tell Drona that Ashvatthama had been slain. Now Ashvatthama was Drona's son and it was thought that he would not continue to fight if he believed his son to be dead.

Arjuna, Shri Krishna's especial pupil and best beloved, refused to take such means of gaining a victory, regarding a falsehood as unworthy, even though used as a stratagem against a foe, and caring not for a victory stained by a lie. Bhishma, less scrupulous, slew an elephant named Ashvatthama and then shouted to Drona, "Ashvatthama is slain!" a statement true in words, but false in the meaning conveyed. Drona was shaken for a moment, but then refused to believe the news, sending to ask Yudhishtira if his son were really slain, for he firmly believed that Yudhishtira "would never speak an untruth, even for the sovereignty of the three worlds."

Yudhishtira hesitated. It was the fifteenth day of battle, and none could defeat Drona; he was invincible, and the army of the Pandavas was melting away before him. As he hesitated, Shri Krishna, standing by, advised him to say that Ashvatthama was dead. Sheltering himself under this advice, Yudhishtira said: "Ashvatthama is dead," adding, under his breath, "the elephant" — a poor subterfuge, seeking to gain the advantage of a lie while preserving verbal truth.

Here Shri Krishna distinctly advised the telling of the lie, and this may serve as an instance of the cases on which the accusation against Him is based.

Here is Mrs. Besant's reply to this accusation:—

Such trials of steadfastness in virtue, despite all argument and all authority, are the means whereby God tests those who are approaching perfection, but have yet left in them some traces of human weakness. Through some one to whom they look up, He tests the reality of their love of righteousness, their fidelity to principle, their steadfastness in right doing, their clearness of discrimination. And what Ishvara does generally through the agency of others, He Himself did as Shri Krishna. He tested the three Pandavas, His dearest friends, those who were nearest to Him; only Arjuna stood the test, and remained invincibly loyal to truth. The inner weakness of Yudhishtira came out under the test, and bitterly did he suffer for his fall. But that suffering cleansed him from his weakness, and when at the close of his life he

was exposed to a similar trial, and a God bade him desert a dog that was under his protection, he refused and stood firmly to the right, rejecting heaven if to be bought by a treachery.

It is thus that Ishvara tries us to the uttermost, that we may become perfect and established in righteousness. Shri Rama was commanded by His Guru to take the crown which was His by birth, against His father's order; He refused. Bharata was commanded to take it, by the same sacred authority; he refused. Thus by example in Ramachandra and Bharata, by counsel in Shri Krishna, Ishvara has taught that a man must do the right, whatever authority may urge him to do the wrong.

Only a God or a Guru, acting without selfishness and wholly for the teaching of the pupil, may thus test a man's virtue. And it was as God and Guru that Shri Krishna acted.

Men are very much governed by words and appearances, and are thus often led into wrong judgments. Speaking generally, not only special tests of the advanced, but all the trials and temptations which meet us, under whatever appearance, come by the will and by direction of Ishvara. He brings them all, and uses them all for our evolution. And in thinking of Shri Krishna, we must remember that He was Ishvara in human form, and that many of His acts are the acts of an Ishvara and not of a man. We see in Him that even our temptations have a divine origin, and have our good as their end. Exactly the same thing is shown in the Christian Bible, where it is said the God accepted the offer of a lying spirit to go out and deceive a king, and bade him go forth and deceive. (1 Kings. XXII 19—23) Only those who cannot recognise the one unswerving will that works for evolution have difficulty in understanding Shri Krishna's actions. He is often as difficult to understand as is human life, for the same Ishvara is in both.

The *Humanitarian* for August publishes the following denial from Father John Gerard, S. J., with regard to the article on the *Monita Secreta* of the Jesuits, which appeared in the July number of that journal and a summary of which was given in our last issue:—

In reply to your inquiry concerning the alleged *Monita Secreta*, I have only to say that the book in question is an acknowledged fabrication, and is described in the British Museum Catalogue as "Apocryphal." Its original author was a Pole, named Zaorowski, an ex-Jesuit who in the judgment of anti-Jesuit writers like Friedrich, Huber, and Rensch professes to reveal what by his own showing he could never have had a chance of knowing. Though the *Monita* originally appeared in 1612 or 1614, they have at various periods subsequently been given to the world as "never before published," as for instance in 1668 and 1782. Altogether, the work cannot be taken seriously, and although it is proverbially hard to prove a negative, I can positively assert, having been a Jesuit now for 45 years, that there is nothing whatever in the constitution or rules of the Order which in the remotest degree resembles the instructions contained in this slanderous publication.



### NIKOLA TESLA AND HIS WORK.

The *Humanitarian* for August opens with an article on the above subject in which the writer, who is evidently one who knew the great scientist well, gives a very concise sketch of his life and career. He describes Nikola Tesla as a man of great enthusiasm, energy and sincerity whose striking features impress one that he is a man of "no common mould but a genius who directs and moulds the world." Want of space alone forbids us from noticing the article at length which gives a very good idea of his quest of knowledge and his serious and continued efforts to carry out his own ideas in electricity in practical use and develop his own inventions. But the most interesting part is where the writer describes Tesla's works which range far beyond the vast departments of polyphase currents and high potential lighting. A few of his other inventions are arc-lighting, transformers, pyro-magnetic generators, thermo-magnetic motors, third-brush regulation, improvements in dynamos, new forms of incandescent lamps, electrical meters, condensers, unipolar dynamos, etc.

We are told that Tesla is engaged on a number of interesting ideas and inventions to be made public in due course. A little reticence is no bad thing and electricity is one of those subjects on which science has a great deal to say, and Tesla will say much. He is also a great humanitarian and he holds that electricity will be one of the great powers of the future in elevating the human race. He regards men as potential gods at whose command, almost without an effort on their part, worlds would disappear and new worlds would be born:—

"According to the adopted theory, first clearly formulated by Lord Kelvin, all matter is composed of a primary substance of inconceivable tenuity vaguely designated by the word 'ether'. The atom of an elementary body is differentiated from the rest of this substance, which fills all space, merely by movement, as a small whirl of water would be in a calm lake.

If the theory of constitution of matter is not a beautiful conception, which in its essence is contained in the old philosophy of the Vedas, but a physical truth, then, if the ether whirl or atom be shattered by impact or slowed down and arrested by cold, any material, whatever it be, would vanish into seeming nothingness, and, conversely, if the ether be set in movement by some force, matter would again form. Thus by the help of a refrigerating machine or other means for arresting ether movement and an electrical or other force of great intensity for forming ether whirls, it appears possible for man to annihilate or to create at his will all we are able to perceive by our tactile sense.

By harnessing the sun's energy and making his machines self-acting these processes of creation and annihilation might be made to go on without human intervention other than the control.

Turning to the much debated question of communication with planets, Tesla declares:—

My measurements and calculations have shown that it is perfectly practicable to produce on our globe an electrical movement of such magnitude that without the slightest doubt, its effect will be perceptible on some of our nearer planets, as *Venus and Mars*. Thus from mere possibility interplanetary communication has entered the stage of probability. The fact that we can produce a distinct effect on one of these planets in this novel manner, namely, by disturbing the electrical condition of the earth, is beyond any doubt. This way of effecting such communication is, however, essentially different from all others which have so far been proposed by scientific men. In all the previous instances only a minute fraction of the total energy reaching the planet—as much as it would be possible to concentrate in a reflector—could be utilised by the supposed observer in this instrument. But by the means I have developed he would be enabled to concentrate the larger portion of the entire energy transmitted to the planet in his instrument, and the chances of affecting the latter are thereby increased many millionfold.

"Besides machinery for producing vibrations of the required power, we must have delicate means capable of revealing the effects of feeble influences exerted upon the earth. For such purposes, too, I have perfected new methods. By their use we shall likewise be able, among other things, to detect at a considerable distance the presence of an iceberg or other object at sea. By their use, also, I have discovered some terrestrial phenomena still unexplained. That we can send a message to a planet is certain, that we get an answer is probable; Man is not the only being in the Infinite gifted with a mind."

Tesla has also a wonderful plan for obtaining heat without fuel; he would harness the rays of the sun and make them obedient to man's bidding. His proposal is to concentrate the rays of the sun on one spot (a glass cylinder) by a series of complicated mirrors and magnifying glasses until he obtains a terrific heat which will do away with the need of coal and other fuel.

The practical and immediate developments of all these wonderful discoveries—the transmission of electrical energy without wires, communication with the planets, harnessing the sun's rays for heat—would mean, in short, that the entire globe could be transformed and made a fitter abode for mankind. They may apparently seem fantastic and perhaps premature, but no one who studies his utterances can fail to see that he has got hold of scientific truths, is not the manner of man who would take anything for granted and that he wants in his experiments to know even the why of the why. Nicholas Tesla rightly called "The Wizard of the West," because of his marvellous genius, is now only 44 years old and if the fire of his enthusiasm does not wear out the strength of the flesh too soon, his will be the greatest name of the twentieth century.

## AMERICA'S AGRICULTURAL REGENERATION OF RUSSIA.

Mr. Alexander Hume Ford contributes a well-meaning article to the *Century Magazine* for August. Mr. Ford begins by laying stress upon the phenomenal demand for American agricultural machinery in the Russian Empire which has more than quadrupled within the last half a decade and doubled even within the last twelve months. This year, it is estimated, Russia will spend from eight to ten million dollars on American agricultural machinery. There is nothing more deceptive than figures and as to America's total exports to Russia, eleven million dollars cover the value of all direct shipments from this country to the Russian Empire. Including indirect shipments, the estimate amounts in value to forty million dollars. It is interesting to follow the movement of this American labour-saving invention from the Western factories where it is turned out, to its final destination:—

All winter, long train-loads of carefully boxed harvesters, reapers, and mowers arrive at our Atlantic seaboard. Toward spring tramp steamers are chartered and the loading begins. Word is cabled from Odessa that the ice is breaking up and the harbor will soon be open for traffic. One by one the heavily laden steamers are hastily cleared, while the indirect shipments made all the year round *via* Hull and Hamburg are also forwarded to the ports of Russia.

The wharves at New York are carefully patrolled day and night by watchmen, for the various companies shipping agricultural machinery to Russia carefully guard their secrets; even when the steamships of the Black Sea fleet-drift-down-stream, the nature of the cargo is not always discernible; not every one knows that the mountains of cases piled on deck contain carefully packed parts of mowers, reapers, threshers, harvesters, cleaners, and rakes. Twenty thousand tons of these in twenty days was the record of shipments from New York alone in the spring of 1901.

During the months of April and May the wharves at Odessa and other Black Sea ports are lined for miles with American agricultural machinery. Heavily laden trains depart daily for every part of European Russia with no other freight than farm implements. The big cases containing the carefully numbered parts are distributed at cities, towns, and way-stations. At the banks of the rivers great barges wait in readiness to float their quota up-or-down-stream, and where the rail road ends toward Asia, long caravans of camels take up the load and carry it to far-off corners of the Russian empire, where the patient ship of the desert is driven in harness to the reapers and mowers from America.

There are in Russia, we are told, peasants enough to more than people America and this vast army of farmers have to depend upon America for their agricultural welfare. There is no other country attempting to compete with America in the manufacture of agricultural machinery and Russia is America's present field of opportunity, the blissful ignorance of the Russian peasant in regard to agricultural systems offering

the most unlimited spheres to her enterprise. Mr. Ford is no pessimist and he holds that upon the agricultural welfare of Russia will depend, for many years to come, America's increase of trade with that country. And when the writer says that Russia has of late thoroughly awakened to the importance of giving her peasants, who constitute ninety per cent. of the population, instruction in modern methods of scientific and diversified farming and sent experts to America to study their industrial and agricultural systems, some idea of the possibility of America's influence in the Russian market, for years to come, may be gathered.

And there is another way to encourage the import of American agricultural machinery:—

In America it is proposed to unite the Great Lakes with the Atlantic by a twenty-eight-foot channel; in Russia hundreds of millions are to be spent on a ship-canal from the Baltic to the Black Sea, while the Don and Volga are to be connected by a forty-million-dollar ship-canal, thus bringing Central Asia in direct water communication with the outside world. Shipments of agricultural machinery may yet be made from Chicago to inland Russia, and the enormous railway and transshipment charges saved to the consumer. Even now harvesters are floated two thousand miles up the Amur into the very heart of Siberia, and a thousand miles up the Sungari into Central Manchuria, which country seems destined soon to become the garden spot and mineral hope of ever-expanding Russia.

It is estimated that at the present rate of increase Siberia will have a population of fully fifty million people by the middle of the century. Hundreds of thousands of peasants now cross the Urals annually. Russia is the most prolific of civilized nations. She can spare for Siberia and Central Asia some two million emigrants every year, this number representing the annual increase of births over deaths in European Russia alone.

Except over a very limited area, mostly in Siberia, the Czar's realm is one vast field of forest and grain and must in the nature of things remain an agricultural country. To Mr. Ford it does not appear possible that Russia will ever become a manufacturing nation, but if ever she becomes one, she will owe the development of her mines to American machinery. Russia looks to her graincrop to make her independent of the world and to America for the inventions that will best enable her to produce abundant crops.

The *Madras Review* for August is a particularly strong number. The place of honor is given to a contribution from Sir Charles Dilke on "The Treatment of Native Races." Mr. Charles Lowe writes on "The Tzar, Nicholas II." Archibald Colquhoun gives a short description of the Chinese people. Among other articles may be mentioned one on "India and the New Imperialism" by Mr. G. Subramania Iyer and another on "Our Public men and the Coming Elections" by the editor.

## TOLSTOY ON THE DUTY OF CIVILISED INDIANS.

The August number of the *Arya*, a useful little new monthly, contains a letter received from Count Leo Tolstoy in which he dilates at length on the duty of civilised Indians. It is in reply to a letter, presumably, addressed to him by the editor of the *Arya*. Here is the letter :—

I thank you for your very interesting letter. I quite agree with you that your nation cannot accept the solution of the social problem which is proposed by Europe and which is no solution at all. A society or community kept together by force is not only in a provisory state, but in a very dangerous one. The bonds that keep together such a society are always in danger of being broken and the society itself liable to experience the greatest evils. In such a position are all the European states. The only solution of the social problem for reasonable beings endowed with the capacity of love is the abolition of violence and the organisation of society based on love, mutual and reasonable principles, voluntarily accepted by all. Such a state can be attained only by the development of true religion. By the words "true religion" I mean the fundamental principles of all religions which are :

1. The consciousness of the divine essence of human soul, and 2. Respect for its manifestation—human life.

Your religion is very old and very profound in its metaphysical definition of the relation of man to the Spiritual All—to the Atman; but I think it was maimed in its moral, i.e., practical application to life, by the existence of caste. This practical application to life, so far as I know, has been made only by Jainism, Buddhism and some of your sects, such as Kabir Panchis, in which the fundamental principle is the sacredness of life and consequently the prohibition to take the life of any living being, especially of man.

All the evils that you experience—the famine and what is still more important, the depravement of your people by factory-life—will last as long as your people consent to kill their fellow-men and to be soldiers (Sepoys). Parasites feed only on unclean bodies. Your people must try to be morally clean.

I quite agree with you that you ought to be thankful for all that has been done by the English—for your well-being—and should help them in all things tending to the civilisation of your people.

I think, the duty of all civilized Indians is :

1. To try to destroy all old superstitions which hide from the masses the principle of true religion, i.e., consciousness of the divine essence of human soul and respect for the life of every human being without any exception—and

2. To spread them as far as possible.

I think these principles are virtually, if not actually, contained in your ancient and profound religion and need only be developed and cleared from the veil that covers them. I think, only such a mode of action can liberate the Indians from all the evils which now beset them and will be the most efficacious means to attain the goal which you are now looking for.

Excuse me for stating my opinion in such a straightforward way, as, likewise for my bad English, as I believe me.

## TOLSTOY'S INFLUENCE.

"L. Investiture de Tolstoy" is the title of an interesting contribution by M. Paul Hyacintherloyson to the July number of the *Revue Franco-Allemande*.

Clothed as a Moujik, with nothing striking or remarkable in his visage except the preoccupied air of a dominating thought, the reflection outside of the soul long practised in virtue and of inflexible will, Tolstoy is a typical Slav exalted but calm. Conscience and Will and Sincerity over all: these form the basis of his character. He is religious inasmuch as he declares himself linked to others by his moral conscience, and life has meaning for him only in such free servitude on behalf of others. He is an anarchist since he accepts no manner of homage for his conscience to any civic organisation and since he formally denies the legitimacy of any human law and recognises only the primordial, absolute, irrefragable law of conscience. That the logical following out of his theory may ruin civilisation causes him no qualms of conscience. Of two precious things which make for progress, of science and conscience, Tolstoy has great contempt for the first and suffers from a hypertrophy of the second.

An anarchist, Tolstoy is no believer in patriotism. It is a matter of notoriety that it is in the name of purest patriotism that worst atrocities have been perpetrated in China and the Transvaal. If men are earnest about universal peace, it is not by Hague Conferences that it can be brought about. Refuse all compromise with the makers of massacre, refuse military service, stop all apprenticeship to the profession of blood.

Tolstoy's philosophy may be described as positivism. He has neglected to throw any light on the existence of God, the immortality of the soul. Where he does venture to discuss such questions he is full of self-contradictions. While his moral work is full of inspiration, it lacks the joyous expansion and sunniness animating the pages of Michlet and St. Francis of Assisi. The last trait brings him unconsciously near to Christ and Buddha.

When after the first period of literary activity Tolstoy betook himself to the plough, Turganiev with his dying breath wished him to return to the art which he glorified. In his last work 'Resurrection,' Tolstoy shows that it is possible to unite the function of the artist and of the apostle.

A reference to the resemblance between Tolstoy and Ruskin with regard to their opinions on art and sociology, their physiognomy, their hand-stitched clothes, their inamusement of their thoughts, and another reference to the exact filiation of Tolstoy's teaching to Christ's brings the article to a close.

